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UNIVERSITY OF ALBERTA

DISCOURSE GROUNDING:
THE MORPHOSYNTAX OF THE MANDARIN DIRECT OBJECTS

BY

YUHUAN WANG

A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements for the degree of DOCTOR OF PHILOSOPHY.

IN

PSYCHOLINGUISTICS

DEPARTMENT OF LINGUISTICS

EDMONTON, ALBERTA

SPRING, 1994

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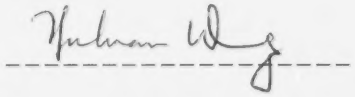

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled DISCOURSE GROUNDING: THE MORPHOSYNTAX OF MANDARIN DIRECT OBJECTS submitted by YUHUAN WANG in partial fulfillment of the requirements for the degree of DOCTOR OF PHILOSOPHY in PSYCHOLINGUISTICS.

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ABSTRACT

DISCOURSE GROUNDING:
THE MORPHOSYNTAX OF THE MANDARIN DIRECT OBJECTS

The morphosyntactic contrasts among Mandarin direct objects in three object-containing constructions, the *ba-*, object-incorporation (O-I) and V#O constructions, are investigated from a cognitive-functional perspective. At the clause level, the three constructions are commonly treated as structural equivalents which represent the same proposition. At the discourse level, however, they appear to differ in distribution and in the way in which the underlying event is construed. A grounding mechanism which allows for a three-way distinction is proposed to account for these differences. It is hypothesized that the *ba*-construction is used to foreground direct objects whose individual references are conceived of as salient for the purpose of the discourse, the O-I construction is employed to background direct objects whose individual references are perceived to be insignificant, and that the V#O construction is the default whereby direct object are left ground-neutral.

To test the theory that the morphosyntactic differences correspond to discourse grounding options, two empirical studies, a quantitative text-analysis and a speaker-judgement experiment, were carried out in the context of Mandarin narrative discourse. Event-sequentiality and rate-of-mention were adopted as criteria against which the discourse saliency of direct objects could be measured. The results of the studies provide a strong support for the claim that Mandarin speakers use the three constructions differentially to impose different degrees of saliency on direct object referents.

The phenomena under study are introduced in Chapter One. Previous attempts to approach the phenomena are refuted as either superficial or limited in data accountability. A cognition-based function-oriented approach is proposed in Chapter Two. Because this approach is articulated in terms of discourse grounding, earlier grounding studies are compared and contrasted. The theoretical claims posited in this chapter are substantiated in the next, wherein typical uses of the *ba-* and O-I constructions are presented and explicated in light of the proposed grounding mechanism. Chapters Four, Five and Six report on the empirical studies. Finally in Chapter Seven, the implications of the present study are presented with respect both to some related grammatical structures in Mandarin and to discourse studies of morphosyntax in general.

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NOTATIONS

I. Mandarin examples are presented in *pinyin*, the official romanization system of the People's Republic of China and the most widely used transcription system in scholarly writings on Mandarin.

II. Gloss and translation:

1. Each Mandarin example is glossed with the clearest and most literal English equivalent possible and is then translated into idiomatic English, which best preserves the original "flavor."

2. In cases where more than one English gloss is possible, the choice is made to best suit the context.

3. Mandarin nouns in general make no distinction between singular and plural. All nouns are glossed as singular, but number distinction is made in translation if necessary.

4. Mandarin pronouns make no distinction between masculine and feminine. Third person singular pronoun *ta* is glossed as "3sg" and translated as "s/he" if there is no need for gender specification.

5. Colon ":" is used between English words which collectively gloss a single Mandarin item.

6. Hyphen "-" is used to indicate the association between a lexical or phrasal form, e.g. a verb, and a grammatical morpheme, e.g. a perfective marker.

7. The number sign "#" is used to indicate word boundary.

III. Special symbols:

1. A question mark "?" is used to indicate an utterance that is odd but not necessarily unacceptable.

2. A star '*" is used to indicate an utterance that is unacceptable to native speakers on either grammatical or semantic grounds.

4. The combination *(x) is used to indicate that for a given example to be an acceptable utterance it must include x.

5. The combination (*x) is used to indicate that for a given example to be an acceptable utterance it must not include x.

ABBREVIATIONS

ABBREVIATION	TERM
ADV	Adverb marker (*-de*)
ADJ	Adjective marker (*-de*)
CL	Classifier for nouns
CRS	Currently Relevant State (*le*)
COMP	Comparative (*bi*)
DUR	Durative aspect (*-zhe, zai*)
EXP	Experiential aspect (*-guo*)
EXT	Extent marker (*-de*)
GEN	Genitive (*-de*)
NEG	Negative (*bie, bu, mei*)
NOM	Nominalizer (*-de*)
PASS	Passive (*bei, rang, gei*, etc.)
PFV	Perfective aspect (*-le*)
PL	Plural marker (*-men, -xie*)
PAUS	Pause particle (*a, ba, me, ne, ya*)
QUES	Question particle (*ma, ne*)
REL	Relative clause marker (*de*)
RVC	Resultative verbal complement (*lai, qu, shang, xia*, etc.)

CHAPTER ONE. MANDARIN DIRECT OBJECTS

THE SEARCH FOR A DESCRIPTIVE FRAMEWORK

1.1. INTRODUCTION

The direct object (DO) of Mandarin Chinese is such a frequent topic of research in the area of word order that one might hope that what is to be known about the grammatical relation would be conveniently obtained as a by-product of the studies on the arrangements of constituents in the clause. It has become increasingly clear, however, that there is much more to this grammatical element than simply an incidental consequence of word order or word order change. To a great extent, indeed, it is not a matter of the DO fitting in with some organizing template of clause structures, but rather the structural template being organized by the DO, by its various speaker-imposed discourse functions. Yet for all its import, Mandarin DO has eluded attention in its own right. Typically, it is subsumed under the universal archetype of the grammatical relation, with its language specific features regarded simply as parametric variations and characterized in word order terms.

Unfortunately, Mandarin DOs do not submit themselves neatly to any systematic characterization by the word order parameter. In fact, some do not even conform to the lexico-syntactic categorization of a universal archetype. Thus, without altering the truth condition of its containing clause, a DO can precede or follow its verb. When it is placed immediately before the verb, it is marked by the morpheme *ba*-[1], effecting the well-known *ba*-construction. When it is positioned after the verb, it may either exist as an independent form or be incorporated into the verb and consequently becomes a defective DO vis-à-vis prototypical instances of the grammatical relation and, indeed, a defective noun vis-à-vis canonical members of the lexical class. The same DO can thus occur in any one of the three morphosyntactic forms, and hence the coexistence of three different object-bearing clause structures in the grammar of Mandarin Chinese which are functionally equivalent for representing the

---

1. *Ba*- has a literary variant *jiang*-.

same propositional meaning. These object-bearing structures are exemplified in (1)-(3) below.

(1) THE VERB#OBJECT (V#O) CONSTRUCTION

na houzi gangcai chi-le ***taozi***
that monkey just:now eat-PFV peach
'That monkey ate a (some, the) peach(es) just now.'

(2) THE *ba*-CONSTRUCTION

na houzi gangcai ba- ***taozi*** *chi-le*
that monkey just:now BA- peach eat-PFV
'That monkey ate the peach(es) just now.'

(3) OBJECT-INCORPORATION (O-I) CONSTRUCTION

*na houzi gangcai chi-****taozi****-le*
that monkey just:now eat-peach-PFV
'That monkey ate some peaches just now.'

The superficial difference between the V#O construction of (1) and the *ba*-construction of (2) is the structural position of the DO relative to the verb. It is essentially such locational variability that makes it impossible to define Mandarin DOs uniformly on the basis of word order. Between (1) and (3), the O-I construction, the difference is that *taozi* 'peach' in the former is a full-fledged grammatical relation as well as an independent lexical item whereas in the latter it is only a noun stem within the verbal complex. It is precisely such categorial disparity that makes it impossible to define Mandarin DOs uniformly in terms of their lexico-syntactic properties. Of course, (2) and (3) differ in both the structural position and the lexico-syntactic status of the form in question, which further compounds the difficulty in formulating a unified and principled characterization of the grammatical relation.

With respect to the propositional content, however, there are no glaring differences among the three example sentences. That is, the above observed structural and categorial contrasts do not have consequences as far as the truth conditions of the sentences are concerned. This being the case, sentences such as (1)-(3) are often considered to be mutually interchangeable and derivative through formal maneuvers of one kind or another (e.g., transformation in Hashimoto, 1971; NP-movement in Lu, 1988).

Nevertheless, however ingenious formalists may have been in devising ways to "handle" the structural (not categorial) contrasts among Mandarin DOs, the question remains as to why such contrasts exist in the first place. After all, it is against our intuition that the three object-containing constructions exist in the grammar of Mandarin Chinese just so that they can substitute for one another. Thus Bolinger maintained, "if a language permits a contrast in form to survive, it ought to be for a purpose," because "it is not normal for language to waste its resources" (1977, p. 19).

There have been searches, in recent years, for the reasons behind the formal contrasts. Unfortunately, these searches are fragmentary in that they are directed only at one facet of the phenomenon, the structural position of the DO. To date, the issue concerning the lexico-syntactic status of Mandarin DOs has been left out intentionally or unintentionally. This is because the categorial variations are not readily observable and are difficult to describe in a so-called isolating language. While extensive evidence will be presented in Chapter Three to demonstrate the existence of object-incorporation in the grammar of Mandarin Chinese, it is enough to note for the present discussion that *taozi* 'peach' in (3) is indeed compounded with the verb, the verb stem to be exact, since the perfective aspect particle *-le*, which can only be suffixed to a verb, is here attached to the V-N complex. Given that the DOs in (1)-(3) do contrast structurally and categorially, I now offer a preliminary analysis of the three object-containing constructions to motivate a full-scale investigation into the purposes for which Mandarin permits the contrasts among the three morphosyntactic forms of DO to exist.

As a first approximation, the three object-containing constructions can be approached by considering the questions they each can be used to answer. Thus, (1) can be a response to 'What did the monkey do just now?' (2) may be used to address 'What did the monkey do to the peach(es) just now?' And (3) can be an answer to 'Did the monkey do anything just now?' The fact that (1)-(3) do not answer the same question should indicate that they differ substantially, even though they share the same truth value. In light of the potential questions, the contrasts among the "potential answers" must be appreciated in terms of how the individual identity of the object referent is

portrayed. In (2), not only is the DO given a conspicuous position, preceding the verb (considering that the basic word order is SVO in Mandarin), it is also flagged with *ba*-. Such special treatment of the DO is justified because what happened to the object referent is the primary concern of the speaker/hearer. In contrast, the DO in (3) is attenuated morphosyntactically. What is at issue in this case is some activity as opposed to, perhaps, inactivity. Because 'peach' is there merely to identify the activity by way of qualifying the verb, it is necessary to withhold attention from its individual identity so that the activity as a whole would not be overshadowed. The DO in (1) is not structurally promoted, nor is it morphosyntactically suppressed. Although the object referent here is not the center of the issue, it is a significant part of it. This being the case, there is no need either to highlight or to obliterate its individual identity. It is quite obvious from the analysis motivated by the potential questions that what morphosyntactic form a DO takes depends on how significantly its referent figures in the event under discussion. Thus, by portraying the same DO with different degrees of specification or abstraction, the three sentences in (1)-(3) can be understood to represent three different conceptualizations of the same event where the object referent is profiled differently in terms of saliency.

Of course, although those questions provide clear indications of how significantly the same object referent can be portrayed in each of the three constructions, the three constructions do not exist just in case the three types of questions are overtly formulated. In other words, the relative saliency of an object referent is not always determined by some specific question. In fact, when a speaker employs a certain object-containing construction, often it is not because he has been informed by the hearer, by way of question, as to how salient a given object referent is, but because he intends to inform the hearer how significantly he is treating that object referent. A question arises as to how speakers determine the saliency levels of object referents. Certainly no object referent is inherently significant or insignificant; there is no objective standard, either, by which speakers can decide whether the individual identity of a given object referent is important enough to be highlighted in the *ba*-construction, or whether it is too trivial not to be suppressed in the O-I construction. It seems, then, how salient an object referent is is essentially a

matter of the speaker's subjective opinion or conceptualization. In other words, an object referent is not so much salient or non-salient as the speaker conceives of it to be in a particular discourse context.

Fundamental to such optional conceptualization is the volitional control of attention on the part of the speaker. That human beings are cognitively capable of manipulating attention is beyond dispute. It is not controversial, either, that the greater amount of attention that is deployed to an entity, the more perceptually prominent that entity becomes; conversely, the greater amount of attention that is withheld from an entity, the less distinct that entity becomes from its own generic type as well as from its situational context. It is thus reasonable to assume that it is in the process of attention allocation that the speaker perceives the individual identity of an object referent to be more or less prominent/salient.

However significant or trivial an object referent may be conceptualized, it has no linguistic relevance apart from the purpose of communication. That is, unless there is a need to convey a certain construal concerning the saliency of an object referent, there is no need to linguistically highlight or suppress the individual identity of that object referent. Only when it is necessary or desirable that the hearer perceives a given object referent in a particular way is it necessary for the speaker to employ a certain linguistic device so that the hearer's attention can be guided accordingly. The three object-containing constructions are such devices. Because they treat DOs with different degrees of specification or abstraction, the speaker in effect prescribes how saliently a given object referent should be considered simply by choosing a particular construction.

On the basis of the relative prominence which the three object-bearing constructions can provide for object referents, the purposes for which Mandarin DOs contrast morphosyntactically can be captured in terms of grounding. Thus, depending on how significantly its individual reference is conceptualized by the speaker, and is intended to be perceived by the hearer, a DO may be brought into the perceptual foreground with the *ba*-construction, pushed into the perceptual background by the O-I construction, or left

ground-neutral in the V#O construction. The three constructions are thus discourse grounding devices which constitute what is referred to here as the GROUNDING MECHANISM in Mandarin Chinese.

The goal of this dissertation is to establish this grounding mechanism as part of the Mandarin grammar, that is, to establish grounding as the purpose for which Mandarin permits the morphosyntactic contrasts to survive. To this end, I shall develop a descriptive framework wherein the three object-containing constructions can be accounted for in a principled and intuitively satisfying manner. The approach is essentially empirical. Thus, assuming that the discourse distributions of the three constructions are non-random, the validity of the proposed grounding mechanism will be tested quantitatively with data drawn from actual discourse. Because the grounding mechanism is cognitively-based and functionally-oriented, the evidence which ultimately supports or refutes the grounding hypothesis will also bear positively or negatively on the more fundamental assumption that grammatical structures in general arise from human cognitive abilities and exist for their communicative functions.

The foregoing discussion outlines the thesis of this dissertation. By way of recapitulation, the three object-containing constructions exemplified in (1)-(3) emerge as grounding devices in the grammar of Mandarin for signaling the relative saliency of DOs discourse. Such devices must be ascribed to speakers' cognitive ability to conceptualized a perceived situation in alternative ways and to their needs to convey their conceptualizations for communicative/discourse purposes. This theoretical perspective contrasts fundamentally with the dominant view that grammar is arbitrary and autonomous, but embraces a non-objectivist philosophy (Bolinger, 1977; Johnson, 1987; Lakoff, 1987; Langacker, 1987; Talmy, 1988) and aligns substantially with much functional research (Du Bois, 1987; Givón, 1984; Haiman, 1986; Kirsner, 1987; Li & Thompson, 1981; Prideaux, 1991).

The present undertaking represents a search for a descriptive system that can best characterize Mandarin DOs. It is one of the many such attempts as far as the structural position of this grammatical relation is concerned; but

it is an unprecedented effort which is set to explain not only the locational but also the categorial variations. This being the case, it is difficult to situate the search conducted here in the context of others. Nevertheless, as limited as earlier studies may be, from hindsight, earlier functional studies provide the stepping stones for the present one. It is only right, therefore, to acknowledge those studies for whatever they have discovered about the phenomenon of Mandarin DOs. In the remainder of this chapter, I will review the salient aspects of three major competing hypotheses documented in the literature. I will assess the tenability of these hypotheses vis-à-vis their internal coherence as well as their susceptibility for empirical verification.

Drawing on the strengths of the earlier functional studies on Mandarin DOs, I will present in Chapter Two a general theoretical framework, which appeals directly to the cognitive-functional nature language. Within this theoretical framework, the proposed grounding mechanism will be fleshed out. The term GROUNDING is not an unfamiliar one in the area of discourse analysis. Indeed, it has generated a great deal of literature since it was introduced. In spite of its popular use, or rather because of its popular use, the notion of grounding needs to be sharpened. Briefly, I understand grounding to mean discourse strategies embodied in linguistic devices that are characteristically language-specific. This view runs contrary to an implicit yet commonly-held assumption that grounding has a language universal structure. In order to contrast what grounding is in Mandarin to what it has been portrayed in the literature, I shall first present in Chapter Two a brief survey of some representative works on the topic. I shall try to bring to light the implied conception held in these works that information values characterizable in terms of discourse grounding are absolute and are largely independent of the speaker. Against such a conception, I shall argue that grounding is invoked by the speaker and that it is essentially from the speaker that a piece of information takes on a certain degree of salience.

Chapter Three provides a general description of the morphosyntax of Mandarin DOs. The three object-containing constructions will be observed within specific contexts and the contrasts among them explicated in light of the general theoretical assumption underlying the present research.

Particular attention will be given to the typical uses of the *ba*- and O-I constructions, leaving the V#O construction as the "elsewhere case" or the default. By "typical" use, it is meant felicitous, sometimes obligatory, use of a given construction. I shall demonstrate that what makes a construction felicitous or obligatory is some expression, present within the clause, that induces a certain specific interpretation with respect to the saliency status of the involved DO. For example, if the extent to which an object referent is affected is overtly indicated by a certain expression, the *ba*-construction is obligatory. Given the logic that one cannot perceive the affectedness of an object referent in full without fully perceiving the referent itself, the obligatory use of the *ba*-construction can be regarded as circumstantial evidence for the argument that a *ba*-marked DO is being held prominently, or considered highly salient, by the speaker at the moment of the discourse production. Arguments such as this will form the basis for the empirical hypothesis that the *ba*-construction and object-incorporation are respectively foregrounding and backgrounding devices conventionalized for speakers of Mandarin to explicitly indicate the relative saliency of object referents.

Although overt expressions of various construals vis-à-vis the relative saliency of object referents impinge on the acceptability of one or another object-bearing construction, clauses with such expressions are not the focus of the present study. The issue of utmost interest here is beyond the clause level. That is, when a clause does not contain any expression that specifically bears on the saliency status of the DO, how should the choice of a particular construction be ascribed to the proposed grounding function of that construction? In other words, given DO, what motivates a speaker to choose a specific morphosyntactic form in preference to grammatically possible alternatives? This question forms the basis of the empirical investigation detailed in Chapters Four, Five and Six. Chapter Four serves as the preamble wherein the general hypothesis is formulated and the analytical framework established. Chapter Five is devoted to a quantitative discourse analysis. The strength of the correlations between the three morphosyntactic forms of DOs and the three independently-definable saliency statues of object referents will be statistically measured. Chapter Six reports on the second part of the investigation, a speaker-judgment experiment designed to further validate

the grounding mechanism. The analytical criteria developed for the text analysis will be adopted as independent variables for the experiment. Procedures will be taken to ensure the reliability of these criteria. Thus, to the extent that the two studies can bear out the grounding hypothesis, the two analytical criteria are viable as indirect means for accessing speakers' saliency-conceptualizations and communicative intentions.

I shall conclude in the final chapter that by appealing to the cognitive-functional underpinnings of the object-containing constructions, Mandarin DOs can be characterized in a unified and intuitively satisfying manner. The implications of the two empirical studies will be addressed with respect to the applicability of the grounding mechanism to related grammatical phenomena which are otherwise arbitrary. Finally, I shall place my research in the broad context of discourse studies and discuss my research findings in relation to the existing knowledge about language and language use.

1.2. COMPETING ANALYSES

In this section I outline the salient features of three prominent analyses of Mandarin DOs. I should point out at the outset that none of these approaches are adequate in that they provide no explanation for the contrast among DOs in terms of their lexico-syntactic properties. Because these analyses assume the phenomenon of Mandarin DOs to be but an issue of word order, the discussion will concentrate on how they handle the structural facts about the grammatical relation. The tenability of these hypotheses will be evaluated in this respect as well.

1.2.1. The Definiteness Hypothesis

It has long been observed that preverbal objects in Mandarin are likely to be definite while post-verbal ones indefinite. On the basis of such an observation, Chao (1968) concluded that: "the subject of a sentence or the object of a pretransitive (i.e., the *ba*-construction, note supplied) has a definite reference whereas the object in an ordinary V-O construction has indefinite reference unless it has specific definite modifiers" (p. 343). Li and Thompson (1975, 1976, 1981) are among the many who embrace Chao's analysis, which

they have reformulated as a set of tendencies and refinements. Reproduced here are two tendencies and one refinement that are relevant to the present discussion:

> TENDENCY A. Nouns preceding the verb tend to be definite, while those following the verb tend to be indefinite.
>
> REFINEMENT 1. The noun in post-verbal position will be interpreted as indefinite unless it is morphologically, inherently, or non-anaphorically definite.
>
> TENDENCY B. Mandarin is currently undergoing an order change from SVO to SOV (1975, p. 170-185).

By formulating the definiteness hypothesis in terms of tendencies, Li and Thompson are rightly less conclusive than Chao, because one does not have to go very far to find indefinite preverbal DOs, as in (4), and definite post-verbal DOs, as in (5), even if they are not inherently, morphologically, or non-anaphorically definite.

(4) *nei-zhi jing-quan ba- yi-bao* ***dupin*** *xiu chu lai*
that-CL police-dog BA- one-CL drug scent out RVC
'That police dog scented out a bag of drug.'

(5) *wo qiao-suo shi yinwei wo diu-le* ***yaoshi***
I break-lock be because I lose-PFV key
'I broke the lock because I had lost the key.'

In addition to these counter-examples, the tenability of the definiteness hypothesis suffers from two further drawbacks. First, with respect to the preverbal position, the hypothesis makes no distinction between subjects and DOs. This has a serious consequence. It is a generally accepted typological analysis that Mandarin is a topic-prominent language. Whether the basic word order is SVO or SOV, the fact remains that subjects are commonly found in the sentence-initial topical position, which is also preverbal. By this fact alone, subjects are most often definite since definiteness is characteristic of topics. Thus, the statement that most preverbal nouns are definite does not say very much about object nouns. On the basis of what we know about "speaker empathy", i.e., speakers tend to choose as subjects those event participants which are familiar, (Chafe, 1976; Kuno, 1976), one should not be surprised that most of the indefinite preverbal nouns are DOs. It is hardly a

commendable methodology, then, to lump together the subjects and the direct objects in the preverbal position and make observations on preverbal versus post-verbal nouns in terms of definiteness.

Second, with respect to the post-verbal position, the hypothesis again appears to be less than rigorous. What it is stating is basically that post-verbal objects are indefinite unless they are inherently or qualified otherwise. Regardless of exceptions such as (5), the crucial point here is that the hypothesis provides no a priori condition for qualifying post-verbal DOs for definiteness. Because the definiteness hypothesis does not prescribe when post-verbal objects should be qualified for definiteness, what it asserts is, in essence, post-verbal objects are indefinite unless they are definite, which is of course uninformative.

While there is some imprecision in its formulation, the definiteness hypothesis is not without good grounds. There indeed seem to be more post-verbal DOs that are unmarked for definiteness than there are preverbal ones. This phenomenon may be in part due to object-incorporation, though. Incorporated DOs, which cannot be qualified for definiteness (or for anything else for that matter), and which are post-verbal, may contribute significantly to the number of "indefinite" post-verbal DOs. Unfortunately, this fact cannot be accounted for by the definiteness hypothesis which does not distinguish incorporated objects from independent ones.

1.2.1. The Topicality Hypothesis

Unlike the definiteness hypothesis which covers noun phrases in the preverbal position indiscriminately, the topicality hypothesis is strictly concerned with DOs. Prominent proponents of this hypothesis are Zubin and Li (1986) and Tsao (1987). In their discussion, Zubin and Li focus on the preverbal position, leaving post-verbal position as the default case. According to them, the position immediately preceding the verb is uniquely topical in Mandarin. As for what qualifies a DO for that position, Zubin and Li point out that it must be "proactive" rather than "retroactive", i.e., its purposeful relation must be "to text which follows it." They further stipulate that a topic "will remain in force (remain 'topical') until it is cancelled" (p. 294). The

notion definiteness is not relevant to their topicality hypothesis. Thus, "although topics may often be 'old' or 'given information', it is not their function to be so;" however, "if an NP is marked as topical (XV), then it will almost always be definite" (pp. 294-295, emphasis is original, X stands for DO). In other words, definiteness is a consequence of, rather than a prerequisite to, topicalization.

Zubin and Li's characterization of preverbal objects can be challenged on several accounts. First of all, it is not clear whether their hypothesis is in accordance with the well known fact that the sentence initial position is topical in Mandarin. If it is, then their hypothesis needs to be explicit about the relationship between sentence initial topics and the so-called preverbal topics. This is by no means a trivial point since the number of SOV sentences in Mandarin is quite large, so large in fact attempts have been made to typologize the language as SOV or as one that is currently undergoing a change from SVO to SOV. Secondly, Zubin and Li do not differentiate preverbal objects that are marked with *ba-* from those that are not, as if the morpheme is completely optional. The implicit assumption underlying their treatment of the *ba-* morpheme is fundamentally erroneous from a cognitive-functional perspective. From this perspective, no linguistic form exists without meaning/function. Theoretical orientation aside, the morpheme *ba-* does have its own import and is a necessary part of a semantic structure, as I will demonstrate in the next chapter. The final comment is on their conception of definiteness. While I agree with them that it is not a function of topic to be definite, I cannot share their argument that an NP becomes definite as a necessary result of its being topicalized. Whether or not preverbal DOs can be analyzed as topics, it is an obvious fact that not all the preverbal DOs are definite. (4) is a case in point.

None of these problems arises from Tsao's (1987) topicality hypothesis. Unlike previous researchers, Tsao starts with not the similarities and difference between the preverbal and post-verbal DOs but those between the first NP and the *ba* NP in the *ba*-construction, which he schematically represents as the following (p.2):

NP_1 ba NP_2 Verb Complement

His major conclusions are that NP_1 is the primary or regular topic, and NP_2 is the secondary topic, a special topic marked by *ba* and that "the meaning of the construction is to make clear the transitivity relation between the primary topic and the *ba* topic." These conclusions he draws after comparing the features of the two NPs with "the properties that the Chinese topic is found to have" (p. 1). According to Tsao, "topic in Chinese can be identified as an NP having the following properties:"

a. Topic invariably occupies the S-initial position of the first sentence in a topic chain.
b. Topic can optionally be separated from the rest of the sentence in which it overtly occurs by one of the four pause particles: *a* (*ya*), *ma*, me, and *ba*.
c. Topic is always definite or generic.
d. Topic is a discourse notion; it may, and often does, extend its semantic domain to more than one sentence.
e. Topic is in control of the pronominalization or deletion of all the coreferential NPs in a topic chain.
f. Topic, except in sentences where it is also subject, plays no role in such processes as reflexivization, passivization. Equi-NP deletion and imperativization (p. 4).

The initial NPs in the *ba*-sentences which he has observed all possess the above-identified topic properties and are hence analyzed as topics. As for the *ba*-NPs, their characteristics are summarized as follows:

a. The *ba* NP invariably occupies the S-initial position of the first S in a *ba* topic chain.
b. The *ba* NP is most often definite or generic but can be specific, especially when the regular topic is in the first person.
c. The *ba* NP has some discourse properties as well. It can extend its semantic domain to more than one S.
d. The *ba* NP is in control of all the pronominalization and coreferential NP deletion processes in a ba topic chain (p. 11).

Tsao seems to be quite content with what he has observed: "the ba NP has almost all the properties of the regular topic NP" and, therefore, "it is justifiable to regard the ba NP as a special kind of topic" (p. 11). Almost all of

these properties are claimed to be identifiable in the *ba*-NP in (6), which is adopted from Tsao [p. 9-11: (22a-d)]:

(6) i. *ta ba-fangzi$_i$ zhengxiu-le yi xia,*
3sg. BA-house repair-PFV a little
'He repaired the house,

ii. (ba 3sg$_i$) qi-le-qi
(BA-3sg) paint-PFV-paint
(he) paint (it)

iii. *ranhou zai (ba-ta$_i$) mai-chu qu*
afterward then (BA-3sg) sell-out RVC
then (he) sold (it).'

While one may accept the analysis that in (6) "there are three clauses that make up the chain, each of which is about *fangzi* 'the house', the *ba* NP, occurring at the head of the chain" (p. 9), one cannot help wondering how this analysis should bear out Property (a). Surely the *ba*-NP *fangzi* 'house' is NOT occupying the S-initial position. I will not comment on Properties (b & c) except saying that they are not unique to *ba*-NPs or to regular topic NPs. I will make some observation on Property (d), however, to set the stage for the discussion of a more serious claim of Tsao. When examining the assertion that the *ba*-NP is capable of controlling "pronominalization and coreferential NP deletion," one needs to bear in mind that "the Mandarin pronouns refer primarily to persons. The third person pronouns are rarely used to refer to animals and even more rarely to refer to inanimate entities. .... In general, a third person pronoun is used to refer to an inanimate entity only when the absence of a pronoun or other noun phrase would render the construction ungrammatical" (Li & Thompson, 1981, p. 134). Admittedly, neither Tsao's sentences in (6) nor mine in (7) sound natural with overt pronouns (they would sound better with overt noun phrases and best with zero anaphors). Nevertheless, they are possible sentences and can serve to prove a point. The point is: if the *ba*-NP in (6) is said to be in control of pronominalization and coreferential NP deletion of the subsequent sentences, then so must be said the first post-verbal NP in (7). Tsao's argument is based on the result of a test that the pronouns, overt or zero, cannot be coindexed with the sentence

initial NP. But neither can those in (7). This again is a problem of non-uniqueness.

(7) i. *ta qu nian mai-le yi-dong* ***fangzi***$_i$,
3ng last year buy-PFV one-CL house
'He bought a house last year,

ii. *jin nian hai zai zhuangxiü* (***ta***$_i$),
this year still DUR renovate (3sg)
this year (he) is still renovating (it),

iii. (***ta***$_i$) *kuai cheng gongdian-le*
(it) almost become palace-CRS
it is almost a palace now.'

To the extent that it is non-unique, the analysis misses an important generalization. The verbs in (6i) and (7i) are both transitive and hence require the complementation of DOs, wherever they are located in the sentences. Such generalization is not missed by accident, though. It is ignored. In order to cover a few special cases where the *ba* NPs are not DOs in the strict sense of the term, Tsao argues "against regarding the *ba* NP as object" (p. 6). These cases are special because they code either a possessor-possessed/whole-part relationship or a sense of adversity. Whereas the *ba*-NPs in these cases are not DOs, they are not so topical, either, in that they do not head topic chains as regular topics do. The following is an example case.

(8) *ta ba ge* ***baba*** *ye si-le*
3sg BA CL father also die-CRS
'His father died on him.'

Nevertheless, the number of such cases is obviously small because Tsao clearly states that the relation between the primary and the secondary topics is one of transitivity and that "most *ba* NPs actually bear the relation of direct object to the verb in the same clause" (p. 36). It seems that he has not really given up the syntactic generalization for the coverage of some data, which are not topics anyway.

The two topicality accounts are concerned strictly with preverbal *ba*-NPs, with post-verbal DOs kept outside the purview of their analytical focus.

However, because *ba*-NPs are commonly DOs, the topicality arguments need to be based not only on how similar the *ba*-NPs are to the regular topic NPs, which are typically subject NPs, but also on how different they are from the post-verbal DOs.

1.2.3. The Contrastive Hypothesis

Sun and Givón (1985) have proposed a contrastive analysis to explain the VO vs. OV opposition in Mandarin syntax. The proposal is apparently motivated by some "cross-linguistic, text-based quantified studies" which indicate quite conclusively that "more accessible/predictable/continuous nominal referents appear post-verbally (VS, VO), while less accessible ones appear pre-verbally (SV, OV)" (pp. 331-332). In the case of Mandarin Chinese, Sun and Givón contend, preverbal DOs, as opposed to post-verbal ones, are not so accessible/predictable/continuous because of the contrastive reading imposed on them. (Note that on this fundamental point the contrastive analysis directly contradicts both the definiteness and topicality hypotheses.) The contrastive hypothesis is based on the observation that "when the OM (object marker *ba*-, note supplied) is not used, other contrastive/emphatic operators----most commonly 'even', 'all', 'only', or negation----characterize the OV construction." Thus they conclude, "the entire OV category involves contrastive emphasis" (p. 333).

Although DOs are obligatorily preverbal in sentences with expressions such as *lian* 'even' and *dou* 'all', which indeed impose contrastive meaning on the DOs, those in the *ba*-sentences do not automatically and necessarily induce a contrastive interpretation. Given the fact that OV sentences with "contrastive operators" (other than *ba*-) are far less frequent than those with the OM *ba*-, it does not seem justifiable to generalize "the entire OV category" as involving contrastive emphasis. Beside the observational inadequacy, the contrastive hypothesis does not independently define CONTRASTIVE or EMPHATIC. Because it is based entirely on the researchers' interpretation of contrastiveness, the theoretical claim is actually non-falsifiable. Nonetheless, Sun and Givón try to substantiate their claim with empirical evidence from text analysis. Unfortunately, because the measurements they use to induce the evidence were developed specifically for topic accessibility analysis, they

have to admit, "our two discourse measurements .... do not by themselves PROVE that the OV order in Mandarin is contrastive/emphatic. However, they are fully compatible with what has been shown elsewhere to be characteristic of such discourse devices" (p. 344, emphasis is original).

1.3. SUMMARY

I have summarized the basic features of three competing hypotheses. As different as they may seem, the three hypotheses actually agree on one important point: DOs in the preverbal position are somehow more salient than those in the post-verbal position. This saliency notion is couched in different terms, though. To a great extent, the three completing hypotheses differ only in the paradigms selected for the characterization of the observed phenomenon. While each of the hypotheses may be more or less successful in forcing the phenomenon into some established paradigm, there is no a priori reason why the phenomenon cannot be characterized in its own terms. If the preverbal position codes more saliency than does the post-verbal position, then preverbal and post-verbal DOs should simply be contrasted in terms of saliency. However their selections of the research paradigms may have been motivated, none of the three hypotheses can rigorously describe Mandarin DOs even just in terms of word order. They either cover irrelevant data or leave out relevant cases. Moreover, none of the hypotheses provides any independent criteria by which their claims can be empirically validated. Nevertheless, these analyses have provided some important insights into the nature of the clause structure in Mandarin Chinese: the preverbal position is special in that it codes more semantic/pragmatic information than does the post-verbal position. Although what kind of semantic/pragmatic information that position codes is yet to be determined, the three hypotheses have at least pointed to a viable research orientation: a discourse functional orientation for future research.

In this initial chapter, I have introduced a phenomenon pertaining to Mandarin DOs. The fact that a DO can take one of the three morphosyntactic forms without alternating the propositional content of the sentence has motivated the present research. The specific purpose of the research is to

determine the conditions under which Mandarin speakers regularly choose one morphosyntactic form over the other two for a given DO when all three are grammatically possible. A more general goal to be reached is to provide a unified and revealing characterization of the object-bearing constructions in Mandarin Chinese. For this general goal, I have outlined a research proposal phrased in terms of discourse grounding. In the next chapter, I shall fully develop the discourse grounding hypothesis.

CHAPTER TWO. DISCOURSE GROUNDING
A COGNITIVE-FUNCTIONAL APPROACH

2.1. INTRODUCTION

The three analyses examined in the last chapter undoubtedly represent an advance in the study of Mandarin DOs. Thanks to these analyses, the positioning of the DO relative to the verb can no longer be treated as an arbitrary fact relevant only to the clause level syntax. The correlation between the positions of the DO and some discourse factors is too strong to be ignored. What is at issue now is the nature of the correlation. Approaching the phenomenon from different facets, the early functional studies have all arrived at the same contention: preverbal DOs are semantically/pragmatically more salient than their post-verbal counterparts. As intuitively appealing as it may seem, however, such a contention has not been theoretically grounded or empirically validated, which may explain the apparent lack of internal coherence and data accountability in these hypotheses. To be sure, the textual effects (definiteness, contrastiveness, etc.) attributable to the positioning of the DO are indices of the relative saliency of the DO, but what is it that makes one position special vis-à-vis the other and what is it that makes a DO salient or non-salient? To add to this list of the questions, why is it that a DO occurs sometimes as an independent form and sometimes as an incorporated form? These questions are the concerns of the present chapter.

The objective of this chapter is to develop a theoretical framework which allows these questions to be properly addressed. This framework appeals directly to the cognitive origin and functional nature of grammatical structures. I will argue in 2.3.1 that the three object-containing constructions arise from the speaker's cognitive ability to conceptualize the same situation in different ways. I discuss in 2.3.2 that the speaker's propensity to construe the same situation in different ways are both motivated and oriented by their communicative intentions. Following these discussions I present in 2.3.3 a descriptive system to characterize the coding relationships between the three

morphosyntactic forms of DOs and three saliency levels of DO referents. Because this descriptive system is articulated in terms of discourse grounding, I will first review in 2.2 some of the most influential studies on the topic in order to differentiate the grounding mechanism proposed here for Mandarin from various grounding structures proposed in the literature.

2.2. EARLY WORKS ON DISCOURSE GROUNDING

The discourse grounding mechanism to be erected later in the chapter contrasts with two types of grounding structure given shape by two lines of grounding studies. One is a bi-level structure. It was introduced by Hopper (1979) and further developed by Hopper and Thompson (1980). As it is characterized, the bi-level structure has two grounding specifications: foregrounding and backgrounding. The other is a multi-level structure. It was proposed by Jones and Jones (1979) and later assumed by Tomlin (1985). Assuming that a given referent could be presented in several degrees of importance, Jones and Jones posited as many as six levels of grounding specification which they claimed to be distinctly coded in the grammar of certain native American languages. In the same spirit, Tomlin stated that English grammar encodes three distinct levels of grounding specification. In what follows, I shall highlight the relevant aspects of these seminal works.

2.2.1. Discourse Grounding as a Binary Notion

There is a considerable body of literature analyzing discourse, especially narrative discourse, as being composed partly of material which reports events and partly of material which elaborates on the reported events. In their effort to characterize the distinction between the two types of material, many discourse scholars employ the notions foreground and background, which are often collectively known as "grounding" strategies. Among the research proposing a two-level grounding structure, most influential are the sequentiality account and the transitivity account.

THE SEQUENTIALITY ACCOUNT. A constant theme running through much of Hopper's recent work is that aspectual phenomena are natural consequences of narrative discourse organization (1979, 1982). Aspect, as he

defines it, is "a device or set of devices which exists in order to guide the language user through a text (1979, p. 219)," presumably along a temporal line. Although admitting that the range of phenomena that are analyzable as "aspectual" varies from language to language, Hopper contends that it is a universal discourse feature that perfective aspect correlates with foregrounded material and imperfective aspect with backgrounded material.

According to Hopper (1979), this correlation between aspect and event grounding is determined by a sequentiality factor. In language after language, Hopper, as well as Labov (1972), Grimes (1975), Givón (1982), and Longacre (1979, 1983), have observed that some events in a narrative are temporally related, i.e., they "succeed one another in the same order as their succession in the real world," while others "may be located at any point along the time axis, or indeed may not be located on the time axis at all" (Hopper, 1979, pp. 214-215). Narrative discourse, Hopper further observes, is organized along a story line which is formed by the in-sequence events, and a change in the relative ordering of such events necessarily results in a break down of the story line or the discourse flow.

Given the discourse importance of event sequentiality, it is expected that the in-sequence events are formally distinguished from out-of-sequence events. Indeed, Hopper has identified the syntactic reflexes of sequentiality on both lexical and syntactic levels. In terms of lexical semantics, the linear ordering of events in a narrative is not possible unless the events are viewed as being discrete. One requirement for such a view of events is that the verbs directly involved must be intrinsically punctual, as opposed to durative or iterative. Of course, the punctuality of the verb is also a prerequisite for a given event to be conceived of as being completed. Because the sequentiality of an event is contingent upon the completion of that event, the action involved in the event must be indicated to have come to an end. This is usually achieved by the perfective aspect marker. Thus, in the broadest grammatical sense, perfective and imperfective aspects are morphosyntactic devices marking respectively the completion and incompletion of events in discourse, and ultimately the in-sequence and out-of-sequence facts about those events. It is clear from this definition that the selection of perfective

versus imperfective verb forms is motivated by the discourse factor of sequentiality.

The analyses would have been adequate and intact if they ended here, i.e., if the distinction between foreground and background information were defined as nothing more than that between in-sequence and out-of-sequence events. Unfortunately, the theory begins to lose grounds when Hopper tries to relate the concept of discourse grounding to an information distribution pattern which he refers to as the "focus structure" (1979, p. 217). By his characterization of the focus structure, the subject in a foregrounding clause is highly topical and presuppositional, and hence is old information. The verb phrase, on the other hand, imparts new information and is therefore the focus of that clause. Conversely, within a backgrounding clause, the subject represents new information, "topic change" is a case in point, and hence is the focus of the clause. Thus, in addition to being in-sequence, a foreground event also represents a focus structure in which old information is coded in the subject role and new information in the predicate. In an opposite fashion, a background event is both out-of-sequence and has a focus structure with old information coded in the predicate and new information in the subject role.

While sequentiality is well motivated as a discourse factor shaping the relationship between the verbal aspectual system and event grounding, the focus structure is not very convincingly argued as such. To begin with, the concepts of new/old information and information that is in-/out-of focus need to be sharply defined. Intuitively, whether a piece of information is new or old is textually or contextually definable, but what is in or out of focus must be defined with respect to the speaker's attention allocation and his communicative intention in a given situation. Although newly imparted information often coincides with focused information, one does not have to go very far to find cases in which it does not. This should be apparent in the analysis of Hopper's own example of the Swahili case.

My position regarding information focus will be elaborated later in the chapter. For now, I assume Hopper's characterization of focus structure and examine the strength of the correlation between predicate focus and event-

sequentiality. For the purpose of the discussion, I borrow the English translation of the Swahili data cited in Hopper (1979, p. 214), reproduced here as Figure 1.1, which was originally presented in a flowchart for illustrating the contrast between foreground events and background events:

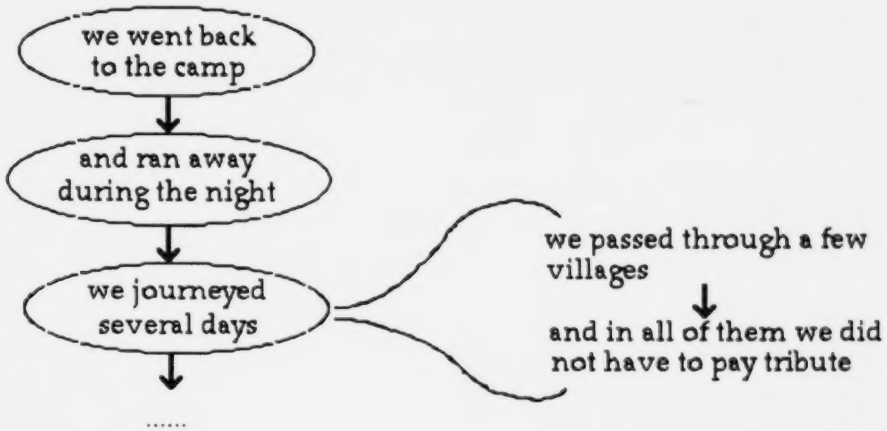
we went back to the camp
and ran away during the night
we journeyed several days
.....
we passed through a few villages
and in all of them we did not have to pay tribute

Figure 1.1. Event-sequentiality and discourse grounding.

By virtue of their sequentiality, the events represented by the circled clauses are foregrounded. Because they are concurrent with the event "we journeyed several days", the two events represented by the un-circled clauses must be analyzed as backgrounded. Such an analysis, Hopper argues, affords a principled explanation for the differential use of the preterite prefixes *ka-* and *ki-*, which otherwise appears to be arbitrary. However, does *ka-* indicate an in-sequence event and, at the same time a focus structure with new information in the verb phrase? Likewise, does *ki-* signal an out-of-sequence event as well as a focus structure with new information in the subject? Viewing the flowchart again, one finds that the subjects of the un-circled clauses are just as topical and presuppositional as the circled ones. Furthermore, the event "we passed through a few villages" is not presented as sequential, and is therefore backgrounded. Yes, the verb phrase in the sentence must be analyzed, by any standard, as carrying new information, as there is neither previous mention in the text nor is there any conceivable contextual clue from which the represented information can be presupposed. It seems that the correlation between sequentiality and the so-called focus

structure is not sufficient to endorse either as a criterion for distinguishing grounding levels. Since such a correlation is not supported even by his own data, Hopper's characterization of event grounding, which involves both sequentiality and "focus structure", cannot be accepted without reservations.

Nevertheless, Hopper's (1979) analysis of the correlation between the textual notion of sequentiality and the formal notion of aspect is illuminating. Further, although not convincingly substantiated, his assertion that foregrounded material comprises more important information than does backgrounded material is intuitively plausible.

THE TRANSITIVITY ACCOUNT. The concept of discourse grounding was further developed by Hopper and Thompson (1980) as an explanation for the morphosyntactic marking of transitivity. Taking as their starting point the assumption that discourse functions as important as foregrounding and backgrounding must be grammaticized in natural languages, they sought to find correlates between foregroundedness vs. backgroundedness of the event on the one hand and high versus low transitivity of the clause on the other.

By their definition, a clause that is high in transitivity is typically punctual and telic, realis and affirmative, and typically involves a volitional agent as well as a highly individuated and totally affected patient (p. 252). The morphosyntactic reflexes of these semantic components of transitivity are not uncommon across languages. For example, the individuation of the patient is most commonly signalled in the definiteness/indefiniteness markings on the object; the punctuality and telicity of actions are generally represented by the perfective/imperfective aspectual morphology on the verb, etc. Based on their observations that the semantic components of transitivity systematically co-vary with the corresponding grammatical reflexes, Hopper and Thompson conclude that "transitivity is a central property of language use" (p. 251). As important as transitivity is in describing the grammar, however, it does not in itself constitute an explanation of the grammar. On the basis of their theoretical premise that linguistic forms exists only for their pragmatic functions, Hopper and Thompson argue that the explanation for the transitivity phenomena lies in discourse grounding.

According to Hopper and Thompson, discourse consists of two types of material, material which "immediately and crucially contributes to the speaker's goal" in communication, and material "which merely assists, amplifies, or comments on" the goal (p. 280). They regard the two types of material as carrying respectively foreground and background information. It thus seems that what differentiate foreground from background information are speakers' communicative goals. This statement has an obvious empirical consequence. That is, to determine what material immediately and crucially contributes to the goal of a speaker, one must first determine what the goal is. Unfortunately, Hopper and Thompson do not provide any means whereby speakers' goals can be objectively derived. Instead, they go on asserting that "the foreground portions together comprise the backbone or skeleton of the text, forming its basic structure; the backgrounded clauses put flesh on the skeleton, but are extraneous to its structural coherence" (p. 281). As plausible at it sounds in theory, the assertion does not suggest any objective standard against which the "basicness" of a given clause can be measured for empirical purposes.

The problem of elusiveness in definition disappears when the notion "basicness" is linked with event sequentiality. As they are intended, basicness and sequentiality are mutually independent criteria by which the grounding status of a given event can be determined. Because the former is not operationally defined, however, the two criteria really boil down to the more viable concept of sequentiality. In the final analysis, then, events which contribute immediately and crucially to the speaker's communicative goal and which form the center of the discourse are those which are presented in the iconic order, "the order of real-world events" (p. 281). Given that the basicness-sequentiality interaction stated here is essentially the same as the focus-sequentiality interaction articulated by Hopper (1979), pertinent views on Hopper's work hold here.

In terms of their theoretical implications, the sequentiality account and the transitivity account seem to be based on different conceptions of discourse grounding. By the former account, grounding is an absolute notion. A

discourse event is either in-sequence and is therefore foreground information or out-of-sequence and is consequently background information. By the latter account, grounding is a relative notion. The relativeness is derived from Hopper and Thompson's characterization of transitivity. An event can be recognized as more or less transitive depending on the number of transitivity parameters involved in the sentence coding that event.

Although transitivity features "are not always objectively given in the content of the sentence per se, but may be subjectively imposed by the speaker" (Rice, 1987, p. 156), Hopper and Thompson's characterization of transitivity, particularly the relativeness, as opposed to discreteness, of transitivity is to become of great theoretical significance for later discourse studies. It is unfortunate, though, that this concept is not followed through in their own arguments. In theory, Hopper and Thompson stipulate that "high transitivity is correlated with foregrounding, and low transitivity with backgrounding" (p. 251). Now if these correlations hold, then discourse grounding should be as much a relative notion as is transitivity. In actuality, however, grounding is but binary and discrete. This is because the criterion that operationally defines grounding specifications has two mutually exclusive values. Thus, because an event is either in- or out-of-sequence, it is either foreground or background information. What is more, to the extent that grounding is operationally binary and discrete, Hopper and Thompson's argument that transitivity is relative and gradient is undermined with their transitivity-grounding correlations.

In spite of its reliance on imprecise definitions, the transitivity account represents an advancement in the study of discourse grounding. First of all, although not articulated to the fullest extent, the relevance of the speaker is recognized in the transitivity account. This recognition has injected a certain amount of dynamism in the characterization of grounding. Speakers may, and indeed do, constantly adjust their perception of the factors that "immediately and crucially contribute to their communicative goals" in accordance with their perception of the ever-changing speaking situations which include, among other things, their listeners' needs (Hopper & Thompson, 1980, p. 280). Thus, at least in theory, grounding distinctions are

not only dictated by the sequentiality fact but also manipulated by the speaker. This line of thinking will be further pursued in the present study.

Secondly, while the transitivity account covers a broad range of semantico-structural phenomena, its most significant contribution to the study of discourse grounding lies not so much in the fact that it can tie those phenomena together but, rather, in keeping them apart. By partitioning an event into participants and the action relating them, the transitivity account has brought a new perspective to discourse analysis. In this new perspective, the basic unit of analysis need not always be the event. Thus, the discourse contribution of event participants, for example, can be assessed in their own terms. Indeed, it is in this perspective that I am able to develop a grounding mechanism which takes the patient participant as the most central element.

By way of recapitulation, it is the assumption of both the sequentiality and the transitivity accounts that the discourse functions of foregrounding and backgrounding are coded in the grammars of natural languages. Although both accounts claim correlations between certain morphosyntactic features and specific grounding distinctions, neither is able to present an empirically verifiable form-function correlation. The morphosyntactic facts observed in Hopper (1979), which fall so neatly under the analysis of event-sequentiality, do not substantially support the grounding analysis that also appeals to the notion of "information focus." Likewise, the morphosyntactic facts examined in Hopper and Thompson (1980), which fall so nicely under the analysis of clause-transitivity, do not bear out the grounding analysis that also appeals to the concept of basicness-of-event. The problem is obviously the lack of independently defined criteria for identifying "information focus" or "basic event" and, consequently, the lack of a rigorously defined distinction between the posited grounding distinctions.

2.2.2. Discourse Grounding as an N-ary Notion

At the same time the bipartite structure was introduced and became influential in discourse studies, Jones and Jones (1979) proposed a multi-level grounding structure in discourse. From their observations on some native American languages, Jones and Jones maintain that discourse information

reflects multiple levels of importance (p. 6). This hypothesis was taken up by Tomlin (1985) in his study on English subordination. In what follows, I will discuss both the issues which are raised in and the issues which arise from these studies.

THE MULTIPLE-LEVEL SPECIFICATION. The multiple-level-hypothesis of Jones and Jones (1979) is essentially an assertion that "there are multiple levels of information in discourse, any one of which may be grammatically marked in particular languages" (p. 21). The nature of the statement is that discourse information types are directly coded by the grammar, and that the number of information types in a language is derived from the number of grammatical forms that can be identified in that language. Guided by this assumption, Jones and Jones have investigated six Amerindian languages and found that three levels of information are always grammatically marked. On the basis of this observation, they conclude that there is a "basic three-level structure" common to all languages. Included in this basic structure are "peak", "backbone" and "background" (p. 8). By peak event, they mean "the single most significant event or sequence of events in a narrative." Events which they refer to as backbone are those that "move the plot forward" (p. 18). The least significant of the three levels is the background which provides "extra information" to the discourse (p. 9). From the basic three-level structure may stem yet three additional levels. The six levels of information are, from the most important to the least, peak, pivotal, backbone, ordinary, significant background and ordinary background. As for how each information level is identified against its neighboring levels, Jones and Jones have this to say: when grouped together, events marked for a lower level of significance give a more detailed summary of the narrative discourse than do those which are marked for the next higher level of significance, and the pooling together of background material "does not yield a satisfactory summary of that narrative" (p. 9).

Jones and Jones' approach to grounding may be critically assessed on several accounts. First of all, the decision on the number of information levels within a language seems to be quite arbitrary. For the purpose of the discussion, Chart 1 of Jones and Jones (1979, p. 22) is reproduced here as Table

2.1, where the six languages under discussion are represented as L1-L6, and "yes" and "no" indicate whether or not a particular level of grounding is coded in a given language .

Information Level	L1	L2	L3	L4	L5	L6
Peak	yes	yes	yes	yes	yes	yes
Pivotal Events	no	yes	***yes***	***no***	no	yes
Backbone Events	yes	**yes**	***no***	***yes***	yes	yes
Ordinary Events	no	**no**	yes	yes	yes	no
Significant Background	no	no	yes	yes	yes	yes
Ordinary Background	yes	yes	yes	yes	yes	yes

Table 2.1. Multiple-level grounding specification.

From the chart, four levels are distinguished grammatically in L2. Looking at the cells indicated in bold, one may ask what justification there is to state that what is grammaticized in this language is backbone information as opposed to ordinary, or significant background. Unfortunately, Jones and Jones never provide any answer. Across the languages, a particular level is intended to be of the same significance. Thus the five levels in L3 are not to be equated with the five levels in L4. This means, for example, the italicized cells under L3 should be understood to contrast with those under L4. However, without any rigorous definition for each individual level independent of the others, it is not conceivable how cross-language invariability of information levels could be maintained.

Secondly, although based on only a few languages, the multiple-level-hypothesis is intended to capture the organization of discourse information in languages in general. Jones and Jones' rendition of this hypothesis is that no grammar has less than three grounding levels, but there is no limit to the maximum number of information types. Thus, while six levels are sufficient for characterizing the information structure of the six Amerindian languages, this number might not be adequate for other languages (1979, p. 7). An issue arising from the multiple-level-hypothesis is one of proliferation. Given the well-known limitations on human information processing, there is reason to be concerned whether six levels are not already too many to manage.

Although the mind is capable of handling seven-plus-or-minus-two number distinctions (Miller, 1956), form-function relationships are presumably much more demanding than simple number items especially during the dynamic course of discourse production/comprehension. Of course, this comment is speculative. How many grounding distinctions speakers can handle on a regular basis is an empirical question yet to be answered.

The final comment on the multiple-level grounding hypothesis is from a methodological perspective. In all cases, the number of information levels posited seems to be solely a function of the number of grammatical phenomena selected from that language. This would be fine if the the grammatical phenomena were selected on the basis of some well defined criteria, if they were analyzed with respect to one another, and if the levels of information were defined independently. However, Jones and Jones provide no analyses or definitions but simply assert the coding relations between the selected grammatical phenomena and the posited levels of information. Of course, such coding relationships cannot be empirically falsified or verified. Nonfalsifiability can be damaging to claims of form-function relationships. In Tomlin's (1985) work, which I review next, the problem of nonfalsifiability is addressed and efforts are made to overcome it.

THE THREE-LEVEL SPECIFICATION. The hypothesis that the foreground-background distinction is not binary but defines a continuum is taken up by Tomlin (1985). For his investigation into the possible connection between independent/dependent clause types and foregrounded/backgrounded information values, Tomlin assumes that the foreground/background distinction is theoretically a continuum, but that, operationally, it can be divided into three discrete levels. These levels are pivotal information, which comprises propositions describing the most important events in the narrative; foreground information, which consists of propositions describing successive events; and background information, which includes propositions supporting pivotal or foreground propositions or performing any other function in the narrative (pp. 89-90).

Although Tomlin starts with a three-level hypothesis, the end result of his analysis is that there are only two levels of information distinguishable in terms of syntactic coding. This can be seen from his hypothesis statement: "independent clauses code foreground and pivotal information; dependent clauses code background information (p. 85). While he rests content with the "empirically evidenced" coding relation between the syntax of independent/ dependent clauses and the three levels of information, one cannot help wondering how pivotal and foreground information are differentiated from one another when they have the same syntactic representation. Obviously, there is a discrepancy between his specific hypothesis, or his empirical finding for that matter, and his general three-level assumption.

Nevertheless, Tomlin's effort represents an attempt at resolving some of the methodological issues concerning functional linguistics in general and the study of foreground/background information in particular. One such issue pertains to defining pragmatic functions. It is a rather common practice for discourse functions to be defined initially in objective morphosyntactic terms. The definition so derived is subsequently taken as the criterion for determining the coding relationships holding between those asserted functions and the overt linguistic forms. This is what Tomlin refers to as the syntax-dependence or circularity problem. Very often, too, the distinctions between related functions are not sharply defined and, consequently, how one function is differentiated from another is very much a matter of the researcher's subjective opinion. In Tomlin's terms, this is the introspection-bound problem. Though Tomlin's own study does not seem to be completely free of these problems, it suggests a new standard for functional work, simply by laying the problems open.

2.2.3. Summary Comments

I have reviewed four major works on discourse grounding. Together they represent two lines of investigation conducted in the past decade or so. One line of study, pioneered by Hopper (1979) and Hopper and Thompson (1980), assumes that discourse grounding essentially has a bipartite structure whereby information of primary relevance or importance is distinguished from that of secondary relevance or importance. The other line of study,

initiated by Jones and Jones (1979) and Tomlin (1985), views grounding structure as having potentially multiple levels of information, the saliency degree of any one level is determined relative to its neighboring level(s). Of course, the difference between the two lines of research lies not only in the number of the grounding levels each posits but also in how the levels are determined. Thus, when it is couched in terms of event sequentiality, the grounding structure is necessarily bipartite, for an event can either be in- or out-of-sequence. On the other hand, if discourse grounding is to account for all grammatical forms that are somehow related in a language, multiple grounding levels have to be posited. Obviously, while the bipartite structure is situation- or event-driven, the multiple-level structure is syntax-driven.

Regardless of their research orientations, these researchers have never really addressed the issue that is fundamentally important for research in discourse grounding: What is grounding? Of course, if explicitly asked, none of the researchers would say that it is just a function of event sequentiality or simply a consequence of syntax, but rather the representation of information of different degrees of importance. The question then is: What decides how important a piece of information is? Or more to the point: What is the role of the speaker? Given a piece of information, if the speaker has the choice to use a grammatical form other than the one identified by the researcher, then it is the speaker that decides the saliency status of that piece of information. This does not seem to be the case in either of the grounding hypotheses, at least it is not presented to be the case. without the speaker's active role in the process, it is no wonder that the bipartite structure appears to be event-determined and the multiple-level structure syntax-driven.

It is on this important issue that I distance myself from these researchers of discourse grounding. I believe that discourse grounding involves first and foremost the speaker, his abilities and propensities as well as his interests and intentions. No information is important or unimportant outside the speaker's conceptualization. This position, which I have alluded to throughout the literature review, will be further elucidated next when I try to articulate a theoretical framework for the study of the object-containing constructions in Mandarin.

2.3. DISCOURSE GROUNDING IN MANDARIN

The remainder of this chapter is devoted to motivating and defining a descriptive system that allows the study of the morphosyntax of Mandarin DOs to be properly located within the more general study of language. For exploratory purposes, this system will be presented as a construal-function-structure trichotomy. I shall first build an argument that discourse grounding is a specific instance of language use which is inextricably bound up with psychological phenomena that are not necessarily linguistic in character. Speakers' ability and propensity to conceptualize the same event in different ways will be the topic of 2.3.1. The functional aspect of the system is discussed in 2.3.2. Grammatical structures are conventionalized linguistic means to serve communicative purposes. To bring an element into the foreground, to push one into the background and to keep one ground-neutral are purposes for which Mandarin speakers make differential uses of the three object-bearing constructions introduced in the previous chapter. Such purposes are above and beyond the representation of propositional meaning. Finally, in 2.3.3, I present the discourse grounding mechanism, which I believe is part of the grammar of Mandarin Chinese. This mechanism is embodied in a set of three coding, or grounding, relationships between three morphosyntactic forms of DOs and three saliency levels of DO referents. These saliency levels are hypothesized to be quite regularly imposed by Mandarin speakers. It will become apparent through the exploration that the construal-function-structure trichotomy is in fact an integrated system of three interacting and mutually-motivating forces that are co-present at all times during discourse production and comprehension.

2.3.1. Cognitive Foundation

The assumption guiding the present study is that grammar by which we code our experience in the world corresponds to a general conceptual system that restricts how we make sense of the world. This system is featured by a host of interactive cognitive traits well-documented in the cognitive psychology literature (cf. Anderson, 1990; Posner, 1989; and works cited therein). Among the cognitive traits are our propensity to impose structures

on perceived information, i.e., our propensity to conceptualize the world, our ability to control attention and our egocentric bias. These three traits are most directly responsible for the grounding mechanism in Mandarin.

CONCEPTUALIZATION. Language is not about reality, it is about how speakers perceive and conceptualize reality. This is because, as Lichtenberk argues,

> Humans do not have direct, unmediated access to reality. Reality exists independently of us, but our perception of it is active, not passive. To a large degree, our perception of the world is determined by structures that originate with us; the concepts we form have to do with the world as perceived by us. The meanings of linguistic elements, then, are not mere reflections of the properties of phenomena; rather, they reflect our conceptualization of the phenomena, and in that sense are subjective (1991, p. 476).

To put the discussion in context, when someone describes an incident he has witnessed, is his description a piece of reality? This is meant to be a rhetorical question, as we know only too well that too many subjective factors can go into the description for it to be an objective report of the incident. What is being described is essentially the outcome of a complex interaction between certain physical phenomena, the witness's sensory impressions of the physical phenomena, and a certain mental structure he has superimposed on his sensory impressions. Thus, the description of the incident can only be the witness's conceptualized version of that incident. Having witnessed the same incident, another person may very well provide a different description, i.e., a different conceptualized version of the incident, as her perception of the physical phenomena and, especially, the mental structure she superimposes on the perceived phenomena may have been influenced by a different set of factors. For different speakers to present different descriptions of the same event is thus natural. Indeed, for the same speaker to describe the same event differently in different situations is quite expected, too, as factors mediating her conceptualization of the perceived information can be different from one situation to another. It is only incidental, it seems, that the descriptions of the same incident should be exactly the same across speakers and at all times.

While there are potentially numerous factors that can enter a speaker's conceptualization in any given situation, for the purpose of the grounding mechanism, I shall limit the discussion to two typical and common ones.

ATTENTION CONTROL. The fact that we are capable of conceptualizing our objective world in different ways is largely attributable to our ability to manipulate attention. There has been a great number of studies in both cognitive psychology and cognitive linguistics on the workings of human perception and the effect of attention in shaping perceptual patterns (Rock, 1984; Talmy, 1988; inter alia). From these studies we have come to know that our perception of physical phenomena typically proceeds concurrently in a number of domains: auditory, visual, tactile, etc. We have also learned that we regularly take one of the domains as the perceptual center while others as the periphery because we are not capable of treating all the domains with equal amount of attention at the same time. Take for example the cognitive process involved in going to a concert. At a given time during a concert, one may be interested primarily in the music, thereby giving perceptual priority to the auditory domain. Likewise, one may be interested particularly in the artistic movements of the conductor, thereby giving a perceptual preference to the visual domain. When a domain gets special attention, it becomes the perceptual center, with other domains pushed to the periphery. Domains in the periphery need not, and often do not, get exactly the same amount of attention. Thus, a domain that is not the attention center can be more or less peripheral. Such center-periphery alignment is the basic perceptual frame within which we further organize incoming information. Whatever causes a particular instance of center-periphery assignment, it is the effect of such assignment that is of particular relevance to the present study.

Once perceptual priority is given to a particular domain, the physical phenomena within that domain become available for conceptual structuring at a higher level of specificity. Still building on the concert example, if I have selected the auditory domain as the perceptual center, I am then able to focus on one particular part of the music. I may choose to concentrate on the violin part, or the cello part, or any other part. No matter which part I choose to follow with special attention, I will perceive that part as being "louder" than

any other part of the music. It is by an analogy of the same nature that Langacker (1987) presented the argument that attention "is intrinsically associated with the intensity or energy level of cognitive processes, which translates experientially into greater prominence or salience" (p. 115) Thus, in addition to the center-periphery alignment of perceptual domains, there is a higher order organization of entities within the perceptual center in terms of more or less importance.

While center-periphery assignment among perceptual domains may or may not be a conscious process, focus selection within a chosen domain is invariably a controlled activity. It is entirely possible for us to perceive all the physical phenomena within a domain as a holistic gestalt, but for one reason or another we may choose not to do so. Using the concert example once again, we are fully capable of receiving the music as an integrated whole. Nevertheless, we may still want to single out, say, the violin part and, as a result, get a perceptual effect of intensified violin sounds. Controlled attention allocation is therefore not a prerequisite for the cognitive process within a perceptual domain. It may be implemented, though, to gain the effect of increased or decreased perceptual values of some entities vis-à-vis others within the same scene.

EGOCENTRIC BIAS. Although we are free to select our attention focus, there are factors that regularly orient our attention allocation processes. One major factor is our egocentric bias. The egocentric bias is a specific instance of "perceptual tuning" (Carr and Bacharach 1976) which is characterized by our tendency to take the ego, ourselves, as the center of our experience relatively independent of the immediate stimulus context. We are subject to our egocentric bias, and the bias is so strong that the ego seems to always occupy the highest place of our unspoken yet permanent agenda. Thus, in the course of daily life we need not consciously choose to attend to ourselves. We routinely do. In fact, the ego-oriented attention allocation is such an expected rule of psychological behavior that it is very much an "automatic process" (Shiffrin & Schneider 1977). Such automaticity both facilitates and restricts our focus selection: our focus of attention is ordinarily selected from among entities other than ourselves.

As for the world around us, attention allocation is quite a "controlled process" (Shiffrin & Schneider, 1977). We deliberately deploy attention to or withhold attention from entities beside ourselves. Moreover, we make conscious decision as to how much attention we pay to what entity at a given point in time. Indeed we may choose not to manipulate our attention at all, in which case we would perceive the world around us holistically.

The distinction between the automatic and controlled processes of attention allocation is essential to the grounding mechanism hypothesized for the grammar of Mandarin Chinese. First of all, it provides a non-arbitrary alignment between viewpoint and object of perception. A viewpoint is the position from which a scene is observed; and an object of perception is an element within a scene, or the scene as whole, at which perceptual activity is directed. To the extent that the ego is the center of the world, the world is perceived from the standpoint of the ego. Specifications of standpoint are central to many grammatical structures. A case in point is the Mandarin topic structure. A Mandarin sentence typically provides a topic which serves as the address from which the content of the sentence is derived. In terms of perception, such address is essentially the standpoint from which an event is perceived. For reasons that go beyond the scope of the present study, the role of topic tends to be overlaid on that of the subject which also tends to code the agent. Thus, when an agent/subject assumes the role of topic and is thereby the vantage point, it can be said to have assumed the highest place in the ego's permanent agenda. Attention allocation vis-à-vis the agent/subject is therefore an automatic process, relatively speaking.

This is easy to conceive of when an agent/subject is the ego. When it is not, appeal must be made to another psychological trait of human beings, one which is subsumed under the egocentric bias. It is the "empathy" trait, "the speaker's identification, in varying degrees, with a participant in an event" if the speaker is not part of that event (Kuno, 1976). Langacker (1991, p. 307) presents an empathy scale on which various types of entities populating the world are ranked according to their potential to attract the speaker's empathy.

speaker > hearer > human > animal > physical object > abstract entity

Slightly different characterizations of speaker empathy are also found in the works of Kuno (1976) and Zubin (1979). It is the consensus among these and many other scholars (cf. Givón, 1984; Li & Thompson, 1981) that speakers regularly assess entities involved in various speech situations in terms of likeness or common interest and empathize with them accordingly.

Given that the ego, or the entity with the highest degree of empathy, is most likely to be coded as topic/subject in Mandarin, the direct object which is not ordinarily identified as the viewpoint is naturally among those elements which are susceptible to the controlled process of attention allocation. While this assertion will be expanded on in the next section, suffice it to say for now that it is through attention manipulation with respect to entities around us that the world is conceptualized in different ways.

The distinction between the automatic and controlled processes is also crucial to the argument that discourse grounding is functional. Ego-oriented attention allocation automatically occurs, irrespective of the speaker's goals and intentions in discourse production. Controlled attention, on the other hand, is task-motivated. That is, the speaker does not direct attention to or way from entities unless she finds it necessary or desirable to guide the hearer's attention, to inform the hearer as to what is or is not particularly noteworthy. Of course, the two types of attention inevitably interact with each other and the linguistic consequences of their interaction are potentially interesting and must be studied. Nevertheless, the distinction between them is necessary in order that the linguistic phenomena pertaining primarily to one or the other type of attention may be investigated rigorously, before those resulting from their interactions can be studied thoroughly.

2.3.2. Functional Orientation

The foregoing discussion was intended to establish the cognitive basis of the grounding mechanism. The key concept entertained in the discussion was attention. For any given event, the speaker is capable of allocating attention in many different ways, thereby forming many different construals of that event, as far as the theoretical possibility is concerned. In reality,

however, the speaker's attention allocation process is restricted and regulated such that the actual number of ways in which an event is construed is substantially smaller. In this section, I look into two such factors: conceptual susceptibility and conventional pattern of grammar to flesh out the argument that attention control is a purposeful activity on the part of the speaker.

CONCEPTUAL SUSCEPTIBILITY. So far I have been discussing attention manipulation with respect to entities as opposed to relations. That our world is made up of entities and various relations holding among entities is an assertion that requires no elaboration. What will demand an explanation, though, is the statement that only entities are subject to attention control in terms of prominence or salience. I start arguing why entities are subject to attention manipulation by arguing why relations are not.

Relations are interconnections among entities. As such, they depend on entities for their full semantic value. Let us take a simple illustration. In *She spilt the soup on the table*, there are two relations, a kinetic relation featured by *spilt* interconnecting the entities *she* and *the soup*, and a locative relation *on* interconnecting *the soup* and *the table*. As important as they are in relating the entities in coherent ways, these relations cannot stand on their own. That is, one cannot conceptualize an act of spilling without making some kind of mental reference to the entity doing the spilling, and also the one receiving it. Similarly, one cannot conceptualize the *on* relation without at least making a mental reference to some surface. The conceptual existence of a relation thus hinges crucially on the entities it is relating. Obviously, as Langacker contends, "one cannot conceptualize interconnections without also conceptualizing the entities that they interconnect" (1987, p. 215). Even if a relation can be conceptualized at all, it cannot be conceptualized as more or less prominent. A relation is fixed, so to speak, as soon as it is established. Hence the *spilt* relation by itself is not capable of being affected by attention manipulation. Neither is the *on* relation. For this argument, the English cleft construction provides some circumstantial evidence. While all the entities in the sentence *She spilt the soup on the table* can undergo clefting, neither of the relations can. The focus system in German (Zubin, 1979) as well as the information structures proposed for various ergative languages

(Du Bois, 1987; Payne, 1987) are all based on the properties and behaviors of entities, not relations. Of course, relations can be negated, put in irrealis mode, etc., but these kinds of manipulation can only have qualitative, as opposed to quantitative, effects. Thus, because relations cannot be increased or decreased in prominence as a result of increased or decreased amount of attention, they are not subject to attention manipulation.

Entities, on the other hand, are very susceptible to attention allocation. Not only are their identities independently conceptualizable, their saliency status are qualitatively manipulable as well. That is, their prominence can be conceptually increased or decreased by way of attention allocation. Given these properties, entities are naturally subject to attention control.

Before continuing, it is necessary to touch upon the concept of entity. ENTITY is understood here in a maximally general fashion. In particular, entities need not be persons or physical objects, though these are prototypical entities. Entities can populate in the conceptual world as well as in the objective world. Thus, for example, in *I can remove her portrait from the wall, but I can never remove her image from my memory, her image* and *my memory* are as much entities as *her portrait* and *the wall.* Furthermore, entities can vary in terms of their internal complexity. That is, they may contain relations internally but are nonetheless conceivable as independent objectified units. Thus, the string *removing her portrait from the wall* in *Removing her portrait from the wall was not without serious considerations* is recognized as representing an entity.

Returning to the topic of conceptual accessibility, although entities in general are available for attention manipulation, not all entities are equally likely to be targeted. Take for example *I finally lifted the fish out of the water with the help of an onlooker* (This is indented as a translation of a Mandarin sentence in which the sentence initial position is topical). At the outset, the ego entity *I* is exempt from discussion as it falls into the speaker's automatic attention. The entities *the fish, the water, the help* and *an onlooker* are then the default objects of controlled attention. For the two reasons given below, *the fish* has a much greater chance of being singled out for perceptual

investigation than do the other entities. First, it is considered self-evident that *the fish* is a major participant in the event, being involved with the major relation *lifted*. Its role in the event makes it worthwhile to manipulate attention with respect to its individual identity. In other words, increasing or decreasing its salience will make a significant difference in the way the event is construed. In comparison, the representation of the event will not be influenced as much by highlighting or obliterating the individual identity of any of the other entities which do not bear as much on the event in the first place. Second, *the fish* is also the only affected/changed entity, at least in terms of location. As such, it is most likely to draw attention. This is hardly inconceivable. Entities to which actions are directed and in which changes thereby take place are capable of attracting attention and, consequently, invite further perceptual manipulation.

On the basis of their conceptual import, affected entities form a class, a class of patient participants of events. Grammatically, members of this class are often realized as direct objects. I will explicitly define direct object in the next chapter. For the moment, I simply take the grammatical term DIRECT OBJECT and the semantico-cognitive notion PATIENT ENTITY to be mutually defining. Patient entities may invite attention manipulation, but they do not necessitate it. How much attention to be deployed to a patient entity, or directed away form it, is completely up to the speaker. The speaker's decision is presumably motivated by his intentions and goals in discourse. I will expand on the cause and effects of such decision in Chapter 3.

CONVENTIONAL PATTERNS OF GRAMMAR. Given the naturalness and likelihood of patients being the potential stimuli to attention manipulation, the number of ways in which an event may be conceptualized is actually quite limited. Nevertheless, since a speaker can potentially pay any amount of attention to a given patient entity at any given time, cross-speaker consistency in the ways events are construed is theoretically impossible. Obviously, it is not the case in reality, or there would not be communication as we know it. A speaker does not simply invent a new linguistic expression every time he wishes to express a construal. It is not because the speaker does not have the linguistic ability, but because the linguistic expression he uses to represent a

construal must be one which has been conventionalized within the linguistic community if communication is to take place. In order to convey a certain construal to the hearer, the speaker must use some agreed-upon means, i.e. conventionalized linguistic device. To some extent, it may seem, speakers' abilities to construe the same event in different ways are checked by linguistic conventions. To put it another way, linguistic structures under-represent speakers' cognitive abilities. This is obviously too complex an issue to be explored here. For the purpose of the thesis, suffice it to say that it is such linguistic under-representation that keeps speakers' construals coherent and meaningful for purposes of communication.

Nevertheless, it is reasonable to believe that "grammars code best what speaker do most" (Du Bois, 1985, p. 363). Grammatical structures are derived from speakers' conceptualizations of various kinds of common human experience and are conventionalized to represent conceptualizations of the same types of experience. That linguistic structures embody construals is obvious upon reflection. Take for example the two English sentences *He reviewed the book* and *He wrote the book-review*. Although they are propositionally equivalent (*book* is intended to have the same reference in both sentences), they nevertheless represent two different conceptualized versions of the same event. That is, the individual identity of the *book* is given more prominence in the first sentence than in the second. Everything else being equal, thus, a speaker conveys a specific construal simply by selecting one structure over the other. This analysis applies to the three Mandarin structures illustrated in (1)-(3).

2.3.3. The Mandarin Grounding Mechanism

In the foregoing two sections I articulated the cognitive foundation and functional orientation of the proposed grounding mechanism. To complete the descriptive system, I present in this section the grounding mechanism itself. In fact, this mechanism was already taking shape in the discussions above. To recapitulate, on the basis of speakers' propensity to impose mental structures on perceived information, their ability to control attention, and their egocentric bias, the grounding mechanism is a set of discourse strategies optionally employed by Mandarin speakers to conceptualize events, with the

egocentric participants of the events held relatively constant. In addition, on the basis of its conceptual susceptibility, the patient participant is the basic element of the grounding mechanism. In sum, the grounding mechanism is essentially a set of linguistic devices by which Mandarin speakers are assumed represent patient participants of events with different degrees of specification or abstraction. In what follows, these linguistics devices are described as the components of a three-way distinction mechanism and characterized in terms of their iconic properties.

A THREE-WAY DISTINCTION GROUNDING MECHANISM. On the basis of the theoretical premise that discourse grounding in Mandarin pertains to patient participants of events, the grounding mechanism is formulated against the backdrop of the morphosyntax of Mandarin DOs. Each of the three object-bearing constructions is hypothesized to represent a specific conceptualization of event where the patient participant of the event is construed to have a specific degree of saliency[1]. Below is a schematic representation of the three-way distinction grounding mechanism:

SALIENCY	MORPHOSYNTACTIC MARKING	GROUNDING DEVICE
Neutral	Inexplicit ground-neutral	V#O construction
High	Explicitly foregrounded	*ba*-construction
Low	Explicitly backgrounded	O-I construction

Two points must be made clear. First, the levels of saliency posited in the grounding mechanism are not discrete and mutually exclusive, nor are the grounding devices absolute and obligatory. In particular, the neutral level of saliency is intended to stand opposition of inclusion to the other two levels. Thus, the V#O construction is the default device applicable to cases where neither foregrounding nor backgrounding takes place. On the other hand, the high and low levels of saliency are relatively distinct from each other. These two levels are explicitly coded by the *ba*- and O-I constructions. Because grounding is a discourse strategy that is essentially optional, it is

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2. Clause structures with topic DOs are outside the purview of discourse grounding. Patient participants designated as topics are best analyzed with respect to ego-oriented automatic attention, whereas the morphosyntactic codings of patients investigated here are analyzed with respect to the controlled process of attention which is task-motivate.

invoked only when the speaker considers it to be most desirable to clearly indicate that the individual reference of a given DO is particularly significant or particularly insignificant for the purpose of the discourse.

Second, operating on a probabilistic basis, the grounding mechanism can be conceived of as manifesting a set of discourse tendencies. DOs whose individual references are construed to be particularly high in saliency tend to be explicitly foregrounded in the *ba*-construction; those whose individual references are conceived of as particularly low in saliency tend to be explicitly backgrounded in the O-I construction; and those whose individual references are neutral in saliency are likely to be left in the more basic V#O construction.

Foreground. To foreground a DO is to bring it into prominence. Being prominent, the referent of the DO can be perceived as highly individuated from its own generic kind and from its situational environment. As a result, the extent to which the referent of the DO is affected can be fully perceived. Elaborations on the affectedness are therefore possible and natural. The purpose of foregrounding is to indicate to the hearer the discourse saliency of the DO. Speaker-imposed discourse saliency is not to be equated with information givenness/newness in the sense that the referent of the DO has, or has not, been established up to the point of speaking. A speaker may choose to foreground a DO whose referent has just been introduced or one whose referent has never been introduced.

Background. To background a DO is to keep it out of the spotlight. A backgrounded DO is usually perceived as unindividuated from its generic type or from its situational environment. With its individual identity obliterated, a backgrounded DO is not available for observation with respect to the extent to which its referent is affected. Elaborations on the affectedness are therefore impossible. The purpose of backgrounding is to prevent DO referents from attracting attention to their individual identities. The referents of backgrounded DOs are not necessarily given or new information. Indeed, they are not necessarily definite or indefinite, referential or non-referential.

Ground-neutral. By default, a given DO is left ground-neutral when its individual identity is considered neither particularly salient nor particularly trivial for the development of the discourse. Not being masked, a ground-neutral DO referent can be perceived as an entity that is distinct from its own generic kind and from its environment. Not being particularly prominent, however, not all information about the referent is available. For example, the extent to which it is affected may not be fully perceivable. Because V#O is ground-neutral, it is susceptible to other discourse operations. Thus, the DO in the V#O construction can be coded for givenness, e.g., it can be coded as a zero anaphor if its referentiality is readily recoverable from the context.

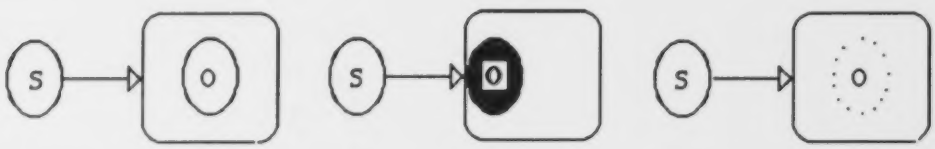
ICONICITY IN THE GROUNDING MECHANISM. Linguists have long noticed that the surface form of a linguistic structure often reflects some aspects of the message which that form is intended to represent (Bolinger, 1985; Croft, 1991; Givón, 1991; Haiman, 1985; Kirsner, 1985; Tai, 1985). Hopper and Traugott interpret such form-message correspondence as diagrammatic iconicity:

> Diagrammatic icons are systematic arrangements of signs. None of the signs necessarily resembles its referent in any way, but, crucially, the relationship among the signs mirrors the relationship among the icon's referents (1993, p. 26).

By this definition, the grounding mechanism in Mandarin is a genuine case of linguistic iconicity as it represents some non-arbitrary arrangements of linguistic signs. In what follows I present two reflexes of the diagrammatic iconicity in Mandarin, word order and morphosyntactic coding, as captured by the proposed grounding mechanism.

Iconicity of proximity. Potentially, a scene can be perceived from many different vantage points and at different levels of specificity (cf. Talmy, 1988). For expressive purposes, however, the number of choices are often limited. Typically, one vantage point is most favored and routinely selected. Various factors contribute to this selection. The most important factor, as far as Mandarin speakers are concerned, is topic designation. Among its other functions, a topic provides the perceptual orientation. That is, the rest of the scene is necessarily perceived from the point of view of the topic. Given that

Mandarin is basically an SVO language plus the fact that Mandarin topic is always sentence-initial, it is the O that is routinely the object of observation from the standpoint of the S. Thus, the closer the O is placed to the S, the more prominent it is for the purpose of perception. This linguistic iconicity is captured by the grounding mechanism presented in Figure 2.1, where the S and the O are indicated by small circles while the V, the predication, is indicated by big squares.



a. Ground-neutral: S V O b. Foreground: S baO V c. Background: S [V-o]

Figure 2.1. Iconic representation of the Mandarin grounding mechanism

By virtue of being preverbal, the O in the *ba*-construction is the closest to the S. Thus, from the standpoint of the S, the *ba*-O is most prominent. The other two cases do not contrast in terms of iconicity of proximity.

Iconicity of quantity. Also captured by the grounding mechanism is the iconicity of quantity with respect to the amount of linguistic coding. The essence of this type of iconicity is simply that linguistic complexity reflects conceptual complexity and discourse saliency. On the basis of this theoretical premise, Givón has proposed a "quantity principle" of the iconicity: "More important information will be given more coding material" (1991, p. 87).

The grounding mechanism in Mandarin entirely supports Givón's principle. The DO in the *ba*-construction is the most salient of the three and indeed it is the most prominently marked: by the object marker *ba*-. In terms of morphological marking, the DO in the V#O construction and that in the O-I construction do not differ in that neither is marked. In terms of qualifying material, the DO in the *ba*-construction and that in the V#O do not differ in that they both can be qualified for quantity (number/amount), referentiality and for as many other properties as considered necessary. None of these qualifying material is possible for the least salient DO in the O-I construction.

To recapitulate, the DO in the *ba*-construction (2.1b) is salient by both the proximity and the quantity accounts. It is closer to the viewpoint of the subject/topic than its counterparts; it is obligatorily marked with the object marker *ba-*; and it is optionally qualified for quantity, definiteness etc. Next in line is the DO in the V#O construction (2.1a) which is neutral in saliency. It is distantly located vis-à-vis the subject/topic; it is not marked with the object marker; but it is optionally qualified for quantity, definiteness, etc. The DO in the O-I construction (2.1c) is the least salient of the three. It is distantly located from the standpoint of the subject/topic; it is not marked by the object marker; it cannot even be optionally marked for quantity or anything. Thus, the saliency levels of the three morphosyntactic types of DOs are iconically reflected in the systematic arrangements of the constituents within the object-containing constructions.

2.4. SUMMARY

In this chapter, I have presented a descriptive system that provides a unified and principled characterization of DOs in Mandarin Chinese. In terms of this system, discourse grounding is understood as a specific instance of language use which is inextricably bound up with speakers' propensity to conceptualization a perceived information in alternative ways, their ability to control attention and their egocentric bias in selecting viewpoint. Derived from the descriptive system is the discourse grounding mechanism, which I believe is part of the grammar of Mandarin. This grounding mechanism is made up of a set of three coding, or grounding, relationships between three morphosyntactic forms of DOs and three saliency levels of DO referents which are optionally imposed by Mandarin speakers. In an important sense, thus, the Mandarin grounding mechanism is a function of the conception-function-grammar interaction. Cognitively-based and functionally-oriented, the grounding mechanism constructed here differs substantially from the grounding structures proposed in the grounding studies I have reviewed.

I have made an effort to distinguish two kinds of attention: automatic and controlled. I have argued that ego-oriented attention allocation is an automatic process and is responsible for the topic-comment alignment in

Mandarin discourse. Task-motivated attention allocation, on the other hand, is a controlled process and is responsible for the grounding mechanism. Such distinction is based on the assumption that discourse is generally organized along several dimensions (cf. Du Bois 1985; Haiman 1986; Hopper and Traugott 1993). Although these dimensions interact with one another, to greater or less degrees as they may, it is necessary to study them separately, if possible, before the nature of their interactions can be fully understood. On the basis of this argument, I assume a basic distinction between the saliency dimension and the topicality dimension of discourse organization and concentrate on the former.

In determining the most likely stimuli to attention manipulation, I have argued that the entities for which speakers tend to direct their attention to or withhold their attention from are ones which can be conceived of as being changed or affected. Since such entities are generally realized as DOs, the morphosyntactic characteristics of DOs must be studied with respect to speakers' cognitive ability to use attention in a controlled way. In the next chapter, I shall observe the morphosyntactic characteristics of Mandarin DOs in light of the theoretical assumptions underlying the grounding mechanism. Systematic differences among the three object-containing constructions, if any, will be understood as evidence of the grounding mechanism.

CHAPTER THREE. EVIDENCE OF GROUNDING

TYPICAL USES OF THE BA- AND O-I CONSTRUCTIONS

3.1. INTRODUCTION

In this chapter I substantiate the grounding hypothesis presented in the last chapter with further data. I shall particularly look into the *ba*- and O-I constructions to search for factors that bear on the grounding mechanism. The V#O construction will not be specifically analyzed but will be used as a point of reference. Observed in Section 3.3 are some typical cases of the *ba*- construction. The purpose of the observation is to determine the factors that exclusively select this construction. These factors, as I shall demonstrate, are not essential as far as the syntax and the propositional meaning of the clause are concerned. That is, they need not be overtly represented within the clause, if they are, they resist the other two constructions. Observed in 3.4 are some typical cases of the O-I construction. DOs that are semantically contiguous with their subjects or verbs opt for O-I. As will be seen, it takes a strong clause-external motivation for the other two constructions to be acceptable. It will become clear that the factors that warrant the *ba*- and O-I constructions are respectively extent-of-affectedness and the lack of semantic independence on the part of the DO. These factors, I will argue, constitute circumstantial evidence supporting the grounding mechanism. The premise of the argument is that for the affectedness of a DO to be perceived in full, the DO must be foregrounded so that it can be fully perceived; on the other hand, for the semantic contiguity between a DO and its subject or verb to be represented, the DO must be backgrounded. Of course, these two factors are interrelated. Thus, if foregrounded, a DO is highly individuated; and when backgrounded, its affectedness is not likely to be fully recognized.

For the purpose of this chapter as well as the general empirical task undertaken, it is crucial that I correctly identify DOs. Included in 3.2 is an operational definition and some informal means by which I identify DOs for observation and analysis. While DOs are the focus of the study, not every DO can occur freely in all three of the morphosyntactic forms for a given clause. I

must also present reasons in this section for excluding certain types of DOs from the present study.

3.2. IDENTIFYING DIRECT OBJECTS

DIRECT OBJECT. Although notions such as subject and direct object have been given a priority in nearly every theoretical account of grammar (Bresnan, 1982; Fillmore, 1968; Givón, 1983; Keenan, 1976; Marantz, 1984; Perlmutter & Postal, 1983; Plank, 1984; Vennemann, 1973), they remain elusive nevertheless. Here I will make no attempt to survey all the pertinent descriptions documented in the literature, nor do I purport to provide an all-purpose definition. What I hope to accomplish in the present section instead is an operational definition of direct object which coheres internally, holds promise of empirical adequacy, and which coordinates with the theoretical outlook of the proposed discourse grounding mechanism. I should point out outright that the definition is language-specific and hence no cross-linguistic validity is claimed.

In keeping with the theoretical framework outlined for the proposed grounding mechanism, the definition for the notion direct object must reflect the cognitive origin and the functional nature of grammatical organizations. As a first approximation, a direct object is defined as a clause constituent that designates the patient of a transitive relation. Of course, the two concepts employed in the definition, patient and transitive relation, beg for immediate elaboration.

The TRANSITIVE RELATION is here understood as a goal-oriented force-dynamic action (cf. Rice, 1987). By force-dynamic, it is meant that a transitive relation is typically rapid, energetic and is capable of producing effect. By goal-oriented, it is meant that a transitive relation is typically an action directed at an intended target. Uniquely identified by the transitive relation is the patient, the target of the transitive relation. To reiterate, the PATIENT is typically an entity at which some externally instigated force is directed and in which internal change of state take place as a result. The defining property of patient thus lies in the notion of change or, more technically, AFFECTEDNESS.

With the concepts transitive relation and patient expounded, the identification of the DO can be discussed in a more concrete terms. Simply, a DO is that constituent of a transitive clause which is most intrinsically related to the verb. "Intrinsic" is the key feature here. However, it is also an elusive notion which, without qualification, cannot be used as a viable criterion for identifying DOs. While it may be possible to formally define the relationship between a transitive verb and its DO, it is also possible to informally test a form in a clause for its objecthood by some well-defined means. For the practical purpose of the present research, informal testing suffices, and the *bei*-construction is such a means[1].

The *bei*-construction in Mandarin represents the passive version of a transitive clause. Although "the major use of the *bei*-construction is to signal adversity" (Li and Thompson, 1981), the connotative differences between the "passive" and "active" versions of an event is not an issue here. What is important is that *bei*-construction entails transitivity and is symptomatic of affectedness on the part of the patient. Thus, the fact that a form can be passivized, i.e., can occur in front of *bei* in the *bei*-construction, should testify to its objecthood. The following are two passivizability tests.

(1) a. *ta guan-le **deng** / ba-**deng** guan-le / guan-**deng**-le*
3sg. turn:off-PFV light / BA-light turn:off-PFV / turn:off-light-PFV
'He turned off the light.'

b. ***deng** bei ta guan-le*
light BEI 3sg. turn:off-PFV
'The light was turned off by him.'

(2) a. *haizi sheng-le **bing** / *ba-**bing** sheng-le / sheng-**bing**-le*
child grow-PFV illness / BA-illness grow-PFV / grew-illness-PFV
'The child fell ill.'

b. ****bing** bei haizi sheng-le*
illness BEI child grow-PFV

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1. The patient in the *bei*-construction is not included in the study for two reasons. First, the construction is mainly used to express adverse situations, while the three constructions under study are neutral in this sense. Second, the patient in the *bei*-construction occurs in the topic position. It is excluded from the present study for the same reason other topic DOs are.

In (1), the form in question *deng* 'light' can occur in front of *bei* as in (1b) and is thus the DO of the clauses in (1a). As far as its conceptual property goes, it is the entity that has undergone an internal change of state as the result of the action *guan* 'turn off' which is externally instigated, goal-oriented and forceful. In contrast, *bing* 'illness' in (2) is not passivizable. *Bing* cannot be conceived of as being affected by *sheng* 'grew' which is source-oriented internal reaction. *Bing* is not inherently unaffectable though. When it is intrinsically related to a relation that is capable of affecting, such as *zhihao* 'cure' in (2)', then the *bei*-construction is possible as (2b)' indicates. In this case, it is the DO in the clauses in (2a)'.

(2)' a *yisheng zhihao-le* ***haizi-de bing*** / *ba-**haizi-de bing** zhihao-le*
doctor cure-PFV child-GEN illness / BA-child-GEN illness cure-PFV
'The doctor cured the child's illness.'

b. ***haizi-de bing*** *bei yisheng zhihao-le*
child-GEN illness BEI doctor cure-PFV
'The child's illness is cured by the doctor'

Note in (2a), the form in question cannot occur in the *ba*-construction, either. This is an indication that *ba*-marked forms are typical DOs. Wang (1987), among many others, has argued likewise: the *ba*-construction is a highly transitive clause-type. Thus, whether or not a form can be marked by the *ba*- morpheme, also known as the object marker, is indicative of its direct objecthood. However, there are some rare cases where non-patients can also occur after *ba*- (see fn. 2, p. 55). Thus, while all patients in the *bei*-construction can be hosted in the *ba*-construction, the reverse is not always true. For this reason and for the fact that *ba*- marked DOs are targets of observation, the *ba*-construction will not be used as a means for identifying DOs.

Sometimes, forms which can be passivized do not have reference in the physical world. To say that these forms are DOs does not make the operational definition incoherent, though. In fact, it is quite expected by the the general assumption underlying the grounding mechanism that speakers are capable of imposing affectedness on entities. Not only can they construe the affectedness of an entity, they can also conceptualize an entity, concrete or abstract, as being more or less affected. Thus, the definition coordinates with

the theoretical outlook of the thesis developed here. Supplemented by an independent means of identification, the operational definition of direct object is thus adequate for the empirical purposes here.

DIRECT OBJECT UNDER INVESTIGATION. I have operationally defined DOs as patients of transitive relations, with AFFECTEDNESS identified as the defining property of patients. This definition finds its expression in four types of clause structures in Mandarin. These are exemplified below:

(3) a. *wo xi-le* ***pingguo***
I wash-PFV apple
'I (have) washed a (some, the) apple(s).'

b. (With adequate context)
wo xi-le ***[e]***
I wash-PFV
'I (have) washed it (them).'

(4) *wo ba-* ***pingguo*** *xi-le*
I BA- apple wash-PFV
'I (have) washed the apple(s).'

(5) *wo xi-****pingguo****-le*
I wash-apple-PFV
'I did apple-washing.'

(6) a. ***pingguo*** *(ne) wo xi-le*
apple (PAUS) I wash-PFV
'Apple(s), I (have) washed.'

b. *(wo)* ***pingguo*** *(ne) xi-le*
(I) apple (PAUS) wash-PFV
'I (have) washed the apple(s).'

By the definition provided above, the form *pingguo* 'apple' in each of these four clause types must be analyzed as a DO, because it designates a patient intrinsically involved with a transitive relation coded by *xi* 'wash'. This relation typifies a force-dynamic action which is externally instigated at the patient. The patient is consequently affected, having undergone the process of being cleaned. Furthermore, the event involving the *xi* and *pingguo* can be presented in the *bei*-construction, i.e., the form in question is passivizable.

While clause-types (3-5) are targets of the present study, clause-type (6) does not fall within the purview of the proposed grounding analysis. The DO in (6a) is the topic because it occupies the clause initial position, the structural slot conventionalized for topics in Mandarin, and because it can be separated structurally from the rest of the clause by a pause or a pausal morpheme, a pseudo-linguistic expression that is commonly found between topics and their comments. Clause type exemplified by (6b) is rather rare in actual discourse. It is dialectal if their subjects are overt. When the subject is omitted, (6b) is easily analyzed as a clause with a DO topic, for not only is the DO separable from the rest of the clause by a pausal particle, it in effect occupies the clause initial position. When the subject is present, however, the topicality analysis must appeal to two facts. First, it is not unusual for a Mandarin clause to contain more than one topic. Thus, preceding the predication of a clause, there may be the subject and a time and/or locative expression(s), setting the individual, temporal and/or spatial frameworks within which the predication holds (cf. Li and Thompson, 1981, pp. 85-95). Second, Mandarin topics are generally coded structurally, as opposed to morphologically. Thus the absence of the DO marker *ba* should indicate that the preposed DO has been designated as a topic, primary or secondary. What motivates the topicalization of DOs is, I believe, best investigated with respect to topic-comment organization of Mandarin discourse and hence does not immediately concern the present study.

Illustrated in (3) are two cases of V#O construction. The DO of (3a) has a lexical form, whereas that of (3b) is what is commonly known as zero anaphora, indicated here as [e]. The distribution of zero vs. lexical DOs can only be appreciated in terms of given vs. new information. Zero anaphors are extremely common in Mandarin. Speakers may leave out any clausal constituent which they assume their hearers can recover from the context. The term clausal constituent must be emphasized since what is omitted and subsequently recovered is necessarily an independent phrasal item. This in part explains why only the DO of the V#O construction is omittable. An I-O, which is not an independent clause unit, not even a true lexical unit, must be overtly represented so that it would not be mistaken for a full-fledged independent DO. The DO in the *ba*-construction must also be present at all

times, simply because the DO marker *ba*- obligatorily requires an overt DO to mark. For the purpose of the present argument, then, a clause with a zero DO is treated as having the V#O structure.

In what follows, I examine the morphosyntactic behavior of Mandarin DOs in the *ba*- and O-I constructions, leaving the V#O construction as the "elsewhere case." The objective of the investigation is to identify the factors conditioning the various morphosyntactic reflexes for coding DO. Through this investigation, I intend to flesh out the proposed grounding mechanism and establish the foundation upon which empirical studies will be carried out on the distributional properties of the three structural types.

3.3. THE BA-CONSTRUCTION

The cases to be examined in this section represent the obligatory uses of the *ba*-construction[2]. I will demonstrate that a DO typically opts for the *ba*-construction if its referent is perceived to be maximally affected in one sense or another. The logic behind the linguistic phenomenon is simple: for the affectedness of a patient to be fully perceived, the patient itself must be fully perceived. Of course, no matter how much of the affectedness is perceived, it is up to individual speakers to overtly code the perception. However, if a speaker chooses to elaborate on the amount of change a patient has

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[2] . One obligatory use of *ba-construction*, which is not examined here, is responsible for the analysis of the *ba*- morpheme as the absolutive marker. The proponent of the analysis is Henry Frei (1956) who argued that the function of *ba* was to mark subjects in transitive clauses as well as direct objects of transitive clauses. The claim was based on the b-sentence (originally cited in Frei, 1956, recited in Wang, 1987, p.9).

a. *ta qisi wo le*
3sg anger.die 1sg PER
'He annoyed me to death.'

b. *ba wo qisi le*
BA 1sg anger.die PER
'(Someone) annoyed me to death.'

Frei's analysis is obviously flawed: the subject of the b-sentence is not *wo* but some omitted NP. However, the absolutive analysis might be supported by the following widely cited sentence:

ba ge zei pao le
BA CL burglar run PER
'(Someone) allowed the burglar to escape.' (Cheung, 1973, p. 347)

This is the causative use of the construction, according to Chao (1968) and Cheung (1973), and is employed only to convey a sense of adversity. Thus, a better interpretation of the sentence is: the burglar was unintentionally alarmed and ran away. Of course, one could argue that the above sentence actually has a covert subject and the burglar is in fact the object. Regardless, because this use of *ba* is extremely rare and dialectal, it does not constitute any real problem for analyzing *ba* as the direct object marker in the more standard use of the language.

undergone, it is reasonable to assume that that patient is in the perceptual focus of the speaker at the time of the utterance. In terms of the framework developed here, when the amount of affectedness is explicitly coded for a DO referent, that referent is understood to be conceptually salient.

Six obligatory uses of the *ba*-construction are examined in the present section, three involving DO referents which have concrete existence and the other three involving ones which do not. For patients in which changes are physically observable, the conception of foregrounding is easy to motivate. For those which are not, the grounding conception can be motivated by analogy. I will demonstrate that the same factors which select the *ba*-construction for physical entities also select the construction for mental entities. These factors are various expressions coding the extent to which patients are affected. Thus, if DO-foregrounding is a mechanism that must be transferred from operating on concrete objects in the physical domain to operating on abstract entities in the mental domain, then those coding conventions are vehicles for the transfer.

3.3.1. Affectedness in Totality

In what way a patient is affected depends on the nature of the relation, but to what extent a patient is affected, or more to the point, how much of the affectedness is perceived depends on the perceptibility of that patient. That is, the more prominently a patient is perceived, the more likely its affectedness is perceived in full. Following this argument, an elaboration on the perceived extent of affectedness should presuppose that the affected patient is in the perceptual foreground. (7) and (8) below are cases in point. The *ba*-construction is obligatory when the affectedness is perceived to be total and complete. The expressions coding the extent of the affectedness are indicated in bold.

(7) a. *tamen ba- shu* ***tongtong*** *kan-le*
3-PL BA- tree total cut-PFV
'They cut all of the trees.'

b. tamen **(*tongtong)** kan-le shu
3-PL (total) cut-PFV tree
'They cut the trees.'

c. *tamen* ***(**tongtong)*** *kan-shu-le*
3-PL (total) cut-tree-PFV
'They did tree-cutting.'

d. *tamen ba- shu kan-le*
3-PL BA- tree cut-PFV
'They cut the trees.'

(8) a. *wo ba-xue* ***quan*** *chan-le*
I BA-snow entire shovel-PFV
'I shovelled all of the snow.'

b. *wo* ***(*quan)*** *chan-le xue*
I (entire) shovel-PFV snow
'I shovelled the snow.'

c. *wo* ***(**quan)*** *chan-xue-le*
I (entire) shovel-snow-PFV
'I did snow-shovelling.'

d. *wo ba- xue chan-le*
I BA- snow shovel-PFV
'I shovelled the snow.'

The a-sentences are the optimal representations of the situations with overt coding of total affectedness accompanied by the appropriate grounding specification, i.e., foregrounding, of the DO referents. For lack of a proper notational device, I must state in prose that the *ba*-construction is obligatory in the presence of the extent expressions. In the cases of (b) and (c), the V≠O and O-I sentences respectively, a notational convention is used to indicate that for the sentences to be acceptable the extent expressions must not be included. It is simply unnatural to elaborate on the affectedness of an entity when the entity itself is not fully attended to. Note that although neither (b) nor (c) is possible with the extent expressions, (c) is worse. This observation should be interpreted as further evidence for the argument that the less prominently a patient is perceived the less likely it is for its affectedness to be perceived in full. While the elaboration on the extent of affectedness presupposes the foregrounded status of the affected entity, the reverse need not be true. In other words, the foregrounding of a DO need not require an explicit indication of how much the patient is affected. The (d) sentences are therefore perfectly acceptable without any elaboration on the extent of the affectedness.

3.3.2. Affectedness by Relocation

Impressionistically, motion is a highly influential factor conditioning the deployment of attention. Given a scene in which a patient entity changes in position with respect to the rest of the scene, that entity tends to attract our attention as far as the scene is concerned. While affectedness is commonly perceived on the part of patient entities that are physically moved, it is only when such movements are viewed from the endpoint can the affectedness of the patients be perceived in full. And to the extent that the affectedness is perceived in full, it is considered to be maximal, given the nature of the transitive relation. Following the argument developed earlier, the perception of maximal affectedness is achieved when the affected entity is in the optimal perceptual ground. (9) and (10) provide support for the argument. The important point to observe in these two situations is that when the final locations of the patients are explicitly indicated, the *ba*-construction is obligatorily employed.

(9) a. *ta ba- zumu-de xiaoxiang gua-dao-le* ***qiang-shang***
3sg BA- grandmother-GEN portrait hung-RVC-PFV wall-top
'S/He hung his grandmother's portrait on the wall.'

b. *ta gua-(*dao* ***qiang-shang)****-le zumu-de xiaoxiang*
3sg hung- (RVC wall-top) -PFV grandmother-GEN portrait
'S/He hung up his grandmother's portrait'

c. *ta gua-xiaoxiang-le* ***(**dao qiang-shang)***
3sg hung-xiaoxiang-PFV (RVC wall-top)
'S/He did some portrait-hanging'

d. *ta ba- xiaoxiang gua-*$^{?}$***(shang)****-le*
3sg BA- portrait hung-(RVC)-PFV
'S/He hung the portrait up.'

(10) a. *bie ba- qiu ti* ***jin hu-li***
NEG BA- ball kick into lake-inside
'Don't kick the ball into the lake.'

b. *bie ti* ***(*jin hu-li)*** *qiu*
NEG kick (into lake-inside) ball
'Don't kick the ball.'

c. *bie ti-qiu* ***(**jin hu-li)***
NEG kick-ball (into lake-inside)
'Don't do ball-kicking.'

d. *bie ba-qiu ti *(guo-lai / zou)*
NEG BA- ball kick (over-RVC /away)
'Don't kick the ball over here / away.'

The acceptability of the sentences in (9) and (10) rests on an important conceptual difference between object relocation (as in the a-sentences) and removal (as in the b-sentences). Whereas relocation is destination-oriented, removal is source-oriented. Although both types of movement entail affectedness on the part of the patient, the degree in the former is by far greater. This is because relocation represents a completed process. Not only has the object been moved away from a source, it has been repositioned in a new place. Thus all the information about what has happened to the object is available for observation. In contrast, removal represents a process that is not indicated as completed. All that can be perceived is that the object has been moved away from a source. There is no information about what has finally happened to the object. In an important way, then, expressions coding the final locations of the affected are also expressions indicating the extent of the affectedness. Such expressions invariably select the *ba*-construction because for its affectedness to be properly perceived, the affected entity must be in the foreground. The V#O construction of (b) and the O-I construction of (c) are impossible with the locative expressions because the patients are either ground neutral or in the background. It is interesting to observe that it is worse to have locative expressions in the O-I sentences than in the V#O ones. Also interesting to observe in (9) and (10) is the fact that, just as locative expressions opt for the *ba*-construction, the *ba*-construction also demands some elaboration on the whereabouts of the patients, since the d-sentences are awkward, even unacceptable as in the case of (10d), without some kind of resultative expression at least. Whether foregrounding is the cause or effect of the affectedness by relocation, the essence of the argument stands that the more prominently a patient is treated, the more affected it will be perceived.

3.3.3. Affectedness in Extremity

The situations presented in (11) and (12) also warrant the *ba*-construction. Here the affectedness on the part of the patients is perceived to be maximal in the sense that the patients cannot be affected any further. The

same argument applies as to why the *ba*-construction is exclusively selected for these situations: the amount of affectedness perceived on the part of a patient corresponds to the perceptual status given to that patient. In other words, an elevation in degree of the affectedness is directly correlated with an elevation in the grounding status of the affected.

(11) a. *wo ba- xin si-de **fen** sui*
I BA-letter tear-EXT powder fragmentary
'I tore the letter up to such an extent that its pieces are powder-like.'

b. *wo si **(*fen)** sui -le xin*
I tear (powder) fragmentary -PFV letter
'I tore the letter to pieces.'

c. *wo si-xin- **(*fen)** (*sui) -le*
I tear-letter-(powder)(fragmentary) -PFV
'I did letter-tearing.'

d. *wo ba- xin si (sui) -le*
I BA-letter tear (fragmentary) -PFV/CRS
'I tore the letter up to pieces.'

(12) a. *ta ba- toufa jian-de **bu neng zai** duan le*
3sg BA- hair cut-EXT NEG can still short CRS
'She had her hair cut so shot that it can not be cut any shorter.'

b. *ta jian- **(*bu neng zai)** -duan-le toufa*
3sg cut (NEG can still) -short-PFV hair
'She cut her hair (had her hair cut) short.'

c. *ta jian-toufa **(*bu neng zai)** (*duan) -le*
3sg cut-hair (NEG can still) (short) -PFV
'She had a hair-cut.'

d. *ta ba- toufa jian (duan) -le*
3sg BA- hair cut (short) -PFV/CRS
'She cut her hair (had her hair cut) short.'

The b-sentences of the V#O construction and the c-sentences of the O-I construction differ in the amount of elaboration on the affectedness of the patients they can accommodate. 'The letter' in (11b) has been affected to the extent that it is 'fragmentary' now, and 'her hair' in (12b) has been affected to the extent that it is 'short' now. That is as much affectedness as can be perceived because the patients are indicated as ground-neutral. The sentences are expectedly unacceptable if they include expressions which further describe

how 'fragmentary' and 'short' 'the letter' and 'her hair' have respectively become. The perceptibility of affectedness is even more limited when patients are backgrounded. Thus, the c-sentences reject overt coding of affectedness completely. The acceptability of the d-sentences, on the other hand, does not bear on the presence or absence of any amount of elaboration on the affectedness. What is indicated by these two sentences, as well as by their counterparts in (9) and (10), may be that the use of the *ba*-construction is not solely motivated to express the extent of affectedness on the part of the patients. It may be motivated more fundamentally to express the degree of saliency imposed on the patients by the speaker.

Above, I have examined three uses of the *ba*-construction. In each case, the elaboration on the affectedness of the patient provides direct evidence for the saliency status of the DO. Although the nature of the affectedness differs from one case to another, the affected patients are quite comparable in that they are all concrete entities existing in the physical world. The concept of grounding is easy to motivate with respect to this type of entities. That is, the affectedness of an entity is perceivable to the extent that entity is observable in the usual sense of the word. From this point of view, one would not expect patients which do not have physical references to be capable of being affected or foregrounded. However, the patients in the next three cases are all abstract, and yet they can all be represented in the *ba*-construction. The use of the *ba*-construction in these cases, as I will demonstrate, is licensed by the extent expressions which elaborate on the affectedness of the patients. The argument I am developing is that although the affectedness of abstract patients is not perceivable to the eye, it is certainly perceivable to the mind. Ultimately, it is the speaker's construal with respect to the saliency of the patient that justifies the use of one grounding treatment vis-à-vis another.

It is beyond the scope of the present discussion to explicate how the mind construes. What is of direct relevance here is that the extent of the affectedness perceived by the mind can be expressed as if it were perceived by the eye. Linguists generally refer to this phenomenon as *metaphorical transfer* (Jackendoff, 1983; Lakoff, 1987; Lichtenberk, 1991). Without subscribing to any particular theory in the literature, I understand metaphor

to be a means whereby a concept related to phenomena in one domain of experience is employed for conceptualizing phenomena in another domain of experience. The essence of a metaphorical transfer is analogy. That is, for a metaphorical transfer to take place, the phenomena in the one domain must be conceived of as similar to the phenomena in the other domain. Such similarity is the vehicle for metaphorical transfer. In what follows, I will demonstrate that coding devices that are normally associated with physical entities are used for conceptualizing situations involving abstract entities. Specifically, I will show that the extent expressions which are normally used to code the extent of affectedness with respect to concrete patients can also be used to code the extent of affectedness with respect to abstract patients, and that just as the saliency status of DOs with physical reference can be indicated by these extent expressions, so can ones without physical reference.

The patients to be discussed next, in addition to the fact that they do not exist in the physical world, represent non-canonical DOs in the sense that they do not passivize as easily as do those exemplified in the foregoing discussion. They passivize only in the presence of some extent expressions, whereas the objects discussed earlier passivize with or without any extent expressions. Because passivizability is symptomatic of prototypical DOs, DO-foregrounding vis-à-vis these objects must be motivated metaphorically. Indeed, the objecthood of these entities are motivated metaphorically, too, at least to a certain extent. Thus by licensing the *ba*-construction, the extent expressions have objectified entities which are not normally treated as DOs. Below are three cases illustrating the effect of the metaphoric vehicles --- the extent expressions --- which license the use of the *ba*-construction.

3.3.4. Sanctioning by "Total-affectedness"

The following two examples demonstrate the sanctioning power of the total-affectedness construal. Although the DOs here do not have physical references and the actions involved are not force-dynamic, as is characteristic of canonical transitive relations, affectedness on the patients is nevertheless entailed in the total-affectedness construal. When an entity is construed to be maximally affected, that entity is perceived as a patient, and a salient one at that, for the extent expression coding the total-affectedness construal must be

accommodated in the *ba*-construction. (Because the O-I construction is less likely than the V#O construction to host extent expressions, for economy, O-I sentences will not be included in the present discussion.)

(13) a. *wo ba- gongshi* ***tongtong*** *wang-le*
I BA- formula total forget-PFV
'I have forgotten all of the formula.'

b. *wo* ***(*tongtong)*** *wang-le gongshi*
I (total) forget-PFV formula
'I have forgotten the formula.'

(14) a. *wo ba- wang shi* ***quandou*** *xiang-qilai-le*
I BA- past event complete think-up-PFV
'I have remembered all of the past events.'

b. *wo* ***(*quandou)*** *xiang-qilai-le wang shi*
I (complete) think-up-PFV past event
'I have remembered the past events.'

What is illustrated in (13) and (14) is the distributional criterion regarding the extent expressions. *Tongtong* and *quandou* which encode full-extent of affectedness of the patients must be accommodated in the *ba*-construction where the DOs are expressly foregrounded, as in the a-sentences. However, the same expressions would make the b-sentences of the V#O construction unacceptable because the DOs there are indicated as grounding-neutral.

3.3.5. Sanctioning by "Final-Location"

When an entity is relocated, the affectedness on the entity is conceived to be extensive and complete. Relocation can take place metaphorical, too. A relocated entity does not have to have a physical reference, as speakers can impose a sense of relocation on events that do not involve physical displacement but rather, metaphorical movement. An important point to note in the following examples is that imposition of relocation is circumstantially reinforced by the explicitly indicated final destination of the "moved" entities. As expected, the *ba*-construction must be used to accommodate any construal that highlights the extent of affectedness on relocated entities, because such construal entails an attention focus on the relocated entity.

(15) a. *Lisi conglai bu ba- bie ren fang* ***zai yan-li***
Lisi never NEG BA- other people put at eye-inside
'Lisi never thinks anything of other people.'
(Literally: Lisi never puts others in his/her eye.)

b.* *Lisi conglai bu fang* ***zai yan-li*** *bie ren*
Lisi never NEG put at eye-inside other people

c.* *Lisi conglai bu fang bie ren* ***zai yan-li***
Lisi never NEG put other people at eye-inside

(16) a. *rang women ba- wenti bai dao* ***zhuo-mian-shang*** *lai*
let us BA- issue lay to table-surface-top RVC
'Let us bring the issue out into the open.
(Literally: Let us lay the issue on top of the table.)

b.* *rang women bai dao* ***zhuo-mian-shang*** *lai wenti*
let us lay to table-surface-top RVC issue

c.* *rang women bai-wenti dao* ***zhuo-mian-shang*** *lai*
let us lay issue to table-surface-top RVC

The position of the locative phrases relative to the verbs is not the issue since neither the b- nor c-sentences are acceptable. The crucial issue is whether the affectedness construal is accorded with appropriate grounding specification on the part of the patient entity. Thus, when the final location of a patient entity is explicitly indicated, and its affectedness is thereby indicated to have been perceived in full, the patient is necessarily in the perceptual foreground. The a-sentences are felicitous since the *ba*-construction provides the appropriate grounding specification for the relocated entities.

3.3.6. Sanctioning by "Extreme-affectedness"

When the affectedness on an entity is conceived of as having reached the highest possible degree, it is impossible not to presuppose a transitive relation that has resulted in the high degree of affectedness. The construal that an entity is affected to the greatest possible extent can thus transitivize relations which are not so force-dynamic in the usual sense of the term. The following examples demonstrate the point.

(17) a. *wo ba- ta-de yitu kan-de* ***yi-qing-er-chu***
I BA- 3sg-GEN intention look-EXT one-clear-two-clear
'I completely saw through his/her intention.'

(Literally: I look through his intention to such an extant that it is completely clear to me)

b.*wo kan-de ta-de yitu **yi-qing-er-chu**
I look-EXT 3sg-GEN intention one-clean-two-clean

(18) a. wo ba- jihua xiang-de **tou-tou-shi-dao**
I BA- plan think-EXT item-item-be-logical
'I thought over the plan thoroughly.'
(Literally: I thought over the plan to such an extent that every aspect of it is logical.)

b.* wo xiang jihua **tou-tou-shi-dao**
I think plan item-item-be-logical

Ordinarily, the relations represented by the verbs *kan* 'look' and *xiang* 'think' are not transitive in that they are not force-dynamic. The fact that these verbs occur in the *ba*-construction only when accompanied by extent expressions is quite indicative of the sanctioning power of the extent expressions.

By way of recapitulation, I have illustrated some obligatory uses of the *ba*-construction: a DO must necessarily be highlighted if its referent, the patient of a transitive relation, is construed as having been affected totally, completely or to the maximum degree possible. For demonstration, I have used some extent (locative) expressions, which are sentential constituents, to indicate the presence of the construals. The purpose of the discussion has been to establish that the *ba*-construction is the grammatical structure that has been conventionalized for foregrounding the DO.

Having done that, I must point out quickly that not every use of the *ba*-construction is obligatory at the clause level. This is because the factors observed above, and potentially others, which are necessarily accommodated in the *ba*-construction need not be explicitly represented within the clause. Without clause-internal concerns, the motivation for the choice of the *ba*-construction over the other two constructions must be sought in a larger context, the discourse. In other words, the use of the *ba*-construction need not be justified by any particular construal with respect to the degree and manner of affectedness on a patient. Indeed, the patient itself, by virtue of its importance in the discourse as determined by the speaker, is a strong enough

justification for employing the highlighting mechanism. What motivates the speaker to attach a particular degree of importance to a given patient is one of the empirical questions that is being investigated in the present research and, as such, will be dealt with in detail in the chapters to follow. Just as there are typical uses of the *ba*-construction in Mandarin, there are typical cases of the O-I construction, which I now turn to examine.

3.4. THE OBJECT-INCORPORATION CONSTRUCTION

Object-incorporation (O-I) refers to a grammatical structure in which the patient referent must be analyzed as compounded with the verb, the verb stem to be exact. Orthographically, the differences between the O-I and V#O construction are not glaring because the "verb" and the "direct object" are written as separate forms in both constructions. Morphosyntactically, however, neither form has the integrity that is expected of a full-fledged verb or object noun phrase. Thus, the "verb" in the O-I construction can not appear with grammatical trappings, and the "object" can not occur with noun-qualifying material. In comparison with the *ba*-construction whereby a DO not only is flagged by the particle *ba*- but also preposed, which iconically reinforces the notion of foregrounding, O-I iconically motivates the conception of backgrounding, as the individual identity of an incorporated-object referent is obliterated. Before I exemplify the various cases of O-I, it is necessary that I establish the existence of this morphosyntactic device in the grammar of Mandarin. I shall present arguments that the V and the O in the O-I construction constitute not a verb phrase but a complex verbal word, which shares the characteristics of other lexical compounds and behaves like a mono-morphemic verb. Notwithstanding, O-I compounding differs from ordinary lexical compounding, for the latter is a morphological process motivated by lexical considerations, the former owes its productivity to the cognitive ability and the communicative intentions of the speaker.

OBJECT-INCORPORATION IN MANDARIN. Being basically an isolating language, Mandarin does not provide the prima facie morphological evidence (such as inflectional-affixation or case-marking) that is generally employed to demonstrate the existence of object-incorporation in languages

(cf. Mardirussian, 1975; Mithun, 1984; Sadock, 1986; Baker, 1988). Notwithstanding this observational inconvenience, the fact that Mandarin grammar includes object-incorporation can be verified on phonological, lexical and syntactic grounds.

Morpho-phonological unity. Morpho-phonological evidence for the wordhood of O-I compounds rests on two observations. First, lexical compounds in Mandarin are always pronounced with a single accentual peak, indicating a phonological unity. This accentual pattern is maintained in compounds of the O-I type; incorporated Os are never stressed. Second, lexical compounding often involves a reduction in the number of morphemes of the components, so that the phonological coalescence between the components is physically reinforced. For example, the lexical compound *chuang-lian* 'window-curtain' is constructed from ***chuanghu*** 'window' and ***lianzi*** 'curtain'. In the same fashion, *er-sun* 'son(s)-and-grandson(s)' is from ***erzi*** 'son(s)' and ***sunzi*** 'grandson(s)'. In each case, the components are skeletal morphologically and compact phonologically. When it is semantically possible, this kind of morpheme/syllable reduction is also applied to the O-I. As an example, the expression *qi-shang man-xia* 'to deceive one's superior and delude one's subordinate' is the result of an O-I on two verb phrases ***qipian shangji*** 'to deceive one's superior' and ***manpian xiaji*** to delude one's subordinate'. With *pian* 'deceive' and *ji* 'rank' clipped off, the number of morphemes/syllables in each of the two verbal compounds are reduced to the minimum and, as a result, the phonological unity between the V and O is maximally guaranteed. This kind of morpho-phonological unity is clearly manifested in the numerous stock expressions in Mandarin, e.g., *sang-quan ru-guo* 'to forfeit the sovereign rights and humiliate the nation' is from ***sangshi quanli*** and ***xiuru guojia***; and *jiu-si fu-shang* 'to rescue the dying and heal the wounded' is from *qiangjiu jiang* ***si*** *de ren, yifu shou* ***shang*** *de ren*,' etc.

Lexico-syntactic integrity. An essential property of a compound is that it stands as an integrated whole, resisting parenthetical, modificational or even pausal intrusions. Thus, when the lexical items *chuanghu* 'window' and *lianzi* 'curtain' are juxtaposed for a compound *chuang-lian* 'window-

curtain', any kind of insertion between the two components would result in unacceptable forms, e.g., *chuang* (**wo xiang*, **hong*, **ne*)-*lian* 'window (*I think, *red, *PAUS)-curtain.' To be sure, such intrusion is not allowed in O-I compounds, either. For the O-I construction *wo* ***xie-xin****-le* 'I did letter-writing,' an insertion of any kind between *xie* 'write' and *xin* 'letter' would render it unacceptable as can be expected: *wo xie* (**ya yigong si-feng*)-*xin -le* 'I write (*ya altogether four)-letter.' This is contrasted with the case in which the verb and its DO are not O-I-compounded and in which parenthetical material is admittable, e.g., *wo xie-le, (ya yigong si-feng) xin* 'I wrote (ya, altogether four) letters.'

The coalescence between the components of a compound is also shown by the fact that the compound must always be treated as a basic constituent in grammatical interactions. Thus, for example, despite the fact that *hong* 'red' essentially modifies *lian* 'curtain,' the adjective must be placed in such a position so that its modifying scope is the entire compound: ***hong*** *chuang-lian* 'red window-curtain.' An O-I compound, likewise, is necessarily treated as a unitary whole when interacting with grammatical auxiliaries. In other words, an O-I compound verb must be treated the same way as a mono-morphemic verb. Given the basic word-order facts about Mandarin, the most revealing examples are those which involve the perfectivizing affix *-le*. Suffixed to a verb or a predicate adjective, *-le* indicates the completion of an action or that of a change in state, as in *wo zuotian* ***zai-le*** *ji-ke shu* 'I planted a few trees yesterday,' and *feng-yie* ***hong-le*** *de shihuo* 'when maple-leaves became (have become) red.' If such aspectual marking is required for an O-I compound verb, it must be suffixed to the compound as a whole, as in *wo zuotian* ***zai-shu-le*** , 'I did tree-planting yesterday.'

Function. O-I also differs from lexical compounding in that it is more productive. The difference in productivity should be explained in terms of the motivating factors. Essentially, lexical compounding provides a means for creating names for new entities, be they physical or conceptual. Since the number of entities wanting names is intuitively small at any point in time and also since there are other means to the end, lexical compounding cannot be but limited in applicability. In contrast, the sole purpose of O-I is to down-

play DO referents whose individual identities are non-salient to the speaker in a given speaking situation. Given that any DO referent is potentially reducible in its significance in the dynamic process of discourse production, O-I is an extremely productive morphosyntactic mechanism. Furthermore, for the purpose of creating names for entities, the newness of the name-wanting entities should be an objective truth. In sharp contrast, for the purpose of backgrounding a DO, the salience of its referent is very much a matter of subjective opinion on the part of individual speakers.

Having established the existence of O-I in Mandarin grammar and, in the process, sketched out the morphosyntactic operation, I am now in the position to develop the thesis that the operation of O-I is discourse motivated. To do this, I shall exemplify DOs that are most susceptible to O-I. These are DOs that are not commonly individualized from their verbs or subjects because of they are semantically contiguous with the verbs or subjects. In each case, I shall present a discourse motivation of one kind or another that can override the semantic considerations.

3.4.1. Cognate Objects

Cognate objects are particularly liable to O-I due to their extremely low degree of semantic independence from the verbs. A cognate object repeats the meaning and lexical form of its verb. Clear-cut examples from English are "dance" and "song" in "to dance a dance" or "to sing a song" respectively. The following are typical cognate object constructions in Mandarin:

(19) *bao-**bao**,* *ding-**ding**,* *hua-**hua**,* *kou-**kou***[3]
pack-packet, nail-nail, paint-painting, button-button

As exemplified in these constructions, the referent of a cognate object is either the normal product of or exclusively associated with the action denoted by its verb. Because cognate objects are semantically indistinguishable from the activities that engender them, they do not individually command special attention from the speaker, nor do they contribute significant information to the discourse under usual circumstances. This being the case, cognate objects

[3]. Unless otherwise indicated, DOs exemplified in §3.4 are presented as incorporated forms since they do not commonly occur as independent constituents.

are most commonly incorporated into their verbs, as exemplified in (20), and strong discourse motivations, as exemplified in (21), are required to override their semantic dependency and to accord them separate status lexically and syntactically.

(20) a. *Lisi liu sui kaishi hua-**hua**,*
Lisi six age begin paint-painting,

xianzai [e] shi zhuming huajia
now be famous painter
'Lisi began picture-painting when he was six, now he is a famous artist.'

b.* Lisi liu sui kaishi hua **zhei-fu hua**,
Lisi six age begin paint that-CL painting,

xianzai [e] shi zhuming huajia
now be famous painter
(Intended: Lisi began to paint this picture when he was six, now he is a famous artist.)

(21) a. *Lisi liu sui kaishi hua **zhei-fu hua**$_i$,*
Lisi six age begin paint that-CL painting,
*shi nian hou [e] cai hua wan **[e]**$_i$*

ten year later only paint finish
'Lisi began to paint this picture when he was six, but he didn't finish painting it until ten years later.'

b.* *Lisi liu sui kaishi hua-**hua**$_i$,,*
Lisi six age begin paint-painting,
*shi nian hou [e] cai hua wan **[e]**$_i$,*

ten year later only paint finish
(Intended: 'Lisi began picture-painting when he was six, but he didn't finish painting it until ten years later.')

In (20a), the cognate object is incorporated as there is no need to distinguish it from the activity. The lack of such need renders (20b) unacceptable (at least not felicitous) even though the two clauses are individually grammatical. From the context, there is no indication that the DO referent in (20b) is of any immediate concern to the speaker, nor is it of any particular significance to the discourse. On the other hand, the context of (21a) calls for a distinction of

the cognate object from the semantic field of the verb. That is, the reference to the patient entity again, in the form of zero anaphor represented here as [e], constitutes a strong enough motivation to override the semantic redundancy so as to grant a distinct status to the object referent. (21b) is unacceptable because the discourse motivation are disregarded.

3.4.2. Verb-Specific Objects

Comparable to cognate object constructions are constructions in which the objects are verb-specific in the sense that their referents are patients only to some specific relations, i.e., they are acted upon only by certain specific actions. In other words, verb-specific objects are semantically intrinsic to or contingent upon the verbs they collocate. The verbs, likewise, are object-specific in the sense that they each set a semantic frame which allows a very narrow, if not exclusive, range of possible objects. Although not exact morphological copies of their verbs, as in the case of cognate objects, the verb-specific objects are just as superfluous and, as can be expected, are commonly found in O-I constructions. Examples of verb-specific objects and their object-specific verbs are given in (22).

(22) *chi-**fan***, *chuan-**yi*** *chou-**yan***, *he-**jiu***
eat-meal, wear-clothes, smoke-cigarette, drink-liquor
*shuo-**hua***, *chang-**ge***, *xie-zi*
speak-language, sing-song, write-character

A point to note is that verb-specific objects are ordinarily non-specific. Being stereotypical to their verbs, these objects have a generic interpretation under normal circumstances. Comparable to the case of cognate objects, it takes a strong discourse motivation to individualize verb-specific objects from their verbs, i.e., to have them surface in a neutral, non-incorporating construction. This can be seen from the following example.

(23) a. *ta* *jingchang* *he-**jiu***
3sg often drink-liquor
'He often drink liquor.'
b.* *ta* *jingchang* *ba-**jiu*** *he*
3sg often BA-liquor drink

c. *ta (*jingchang) he-le **nei-ping jiu***
3sg (often) drink that-CL liquor
'He drank that bottle of wine.'

d. *ta (*jingchang) ba-**nei ping jiu** he-le*
3sg (often) BA-that-CL liquor drink-PFV
'He drank that bottle of wine.'

What is described in (23a) is a general activity. This is inferred from the information provided by the adverbial element *jingchang* 'often'. Patients involved in general activities often do not have specific references. Even if they do, their individual identities are unimportant. It is thus unnatural to give such patients prominent independent status. (23b) is unacceptable for this reason. For (23c) and (23d) to be acceptable, the adverbial element must be excluded. Without the adverbials, the clauses can be interpreted as coding specific events, in which case the DOs can be particularized.

3.4.3. Verb-qualifying Objects

Mandarin has a large number of verbs which are particularly schematic in terms of their semantic content and which therefore depend on their DOs to replenish their substance. Bleached as they are semantically, these verbs are easily coordinated with objects of all "colors." Exemplified below are some of the objects that are commonly used with the verbs *da* and *kai*:

(24) *da-**jidan**, da-**jing**, da-**ren**, da-**shui**, da-**xingli***
beat-egg, drill-well, hit-person, fetch-water, pack-luggage
*kai-**che**, kai-**deng**, kai-**jiqi**, kai-**men**,*
drive-automobile, turn:on-light, operate-machine, open-door

It should be obvious from the English glosses that these verbs do not have any fixed semantic content. Whatever meaning they may take on from their objects, they are not conceptually distinct from the semantic content of their objects. This being the case, semantically schematic verbs tend to incorporate their DOs. Thus, to the extent that an I-O lends content to its verb, it gives meaning to the V-O construction. This situation is partly responsible for the so called verb-copying phenomenon in Mandarin: the first "copy" of the verb occurs with a substantiating direct object while the second "copy" is being

complemented by adverbial element. The following examples should put the discussion in context:

(25) *Lisi* ***kai-che*** *kai-de* *kuai*
Lisi drive-car drive-ADV fast
'Driving-car, Lisi drives fast.'

(26) *Lisi* ***xiu-che*** *xiu-le* *liang-ge* *xiaoshi*
Lisi repair-car repair-PFV two-CL hour
'Repairing-car, Lisi repaired for two hours.'

Ordinarily, the car that Lisi drives or has been repairing should be understood as his own. Nevertheless, its individual identity is disregarded here. As far as these general activities are concerned, the only purpose the Os serve is to narrow down the semantic scopes of the verbs by substantiating the verbs. Given that the adverbial occurring in the post-verbal position modifies only the verb, not the verb phrase, it is necessary that the verb has sufficient semantic content.

So far, I have purposely avoided analyzing the incorporated objects as non-referential. As far as the cases discussed above are concerned, the susceptibility of the objects to incorporation may seem to be attributable at least in part to their lack of referentiality. In other words, non-referentiality on the part of the objects at least facilitates incorporation. This is not really the case, however. That is, being referential does not necessarily make a DO any less susceptible to incorporation. Moreover, incorporation does not take away the referentiality of an object, it only obliterates its individual identity. This may seem to be an untenable argument, but it will become obvious, upon the examination of the following typical uses of the O-I construction, that (non)-referentiality of objects impinges little on their incorporability.

3.4.4. Body-Part Objects

Body-part objects in Mandarin constitute a closed and well defined class in terms of their referentiality. By virtue of the fact that they are "possessed," body-part objects are unique in their primary reference: they are as referential as their "possessors." Holding discourse considerations constant, if O-I applies to body-part objects at all, the conditioning factor has to be something

other than non-referentiality. Interestingly enough, what makes a body-part object incorporable is its unmistakable referentiality. This is especially true when it is related to what Haiman (1983, p. 803) refers to as "introverted" verbs, verbs denoting actions which one normally performs on various parts of one's own body. Given an introverted verb, the body-part object is invariably co-referential with its possessor subject. As long as the possessor subject is identified, then, there is no need to individually identify the body-part object. Below are three body-part objects with some incorporating verbs.

(27) ***tou*** *di- / dian- / hui- / tai- / yao-*
head bow-/ nod- / turn:back- / raise- / shake

(28) *yan* *bi- / deng- / mi- / zha- / zheng-*
eye: close- / glower- / squint- / blink- / open-

(29) ***shou*** *ju- / hui- / pai- / shen- / xi- / zhao-*
hand: raise- / wave- / clap- / extend- / wash- / beckon-

Because it is semantically contiguous with its possessor subject, a body-part object is clearly understood as referential without any overt specification. There is no need therefore to maintain the individual reference of the body-part object. This fact is obviously respected in the grammar of the language, for it is unacceptable for the ownership of a body-part object to be overtly specified, unless it is not co-referential with the subject as in (30c).

(30) a. *wo keyi bu xi-**lian**, dan bu neng bu shua-**ya***
I can not wash-face, but not can not brush-teeth
'I can go without face-washing, but not without teeth-brushing.'

b.**wo keyi bu xi **wo-de lian**, dan bu neng bu shua **wo-de ya***
I can not wash I-GEN face, but not can not brush I-GEN teeth
'I can go without washing my face, but not without brushing my teeth.'

c.*?*wo keyi bu xi **ta-de lian**, dan bu neng bu shua **ta-de ya***
I can not wash 3sg-GEN face, but not can not brush 3sg-GEN teeth
'I can go without washing his/her face, but not without brushing his/her teeth.'

(31) a. *wo yao-**tou**, biaoshi bu tongyi*
I shake-head, indicate not agree
'I shook my head, indicating that he did not agree.'

b.*wo *yao* ***wo-de tou***, *biaoshi bu tongyi*
I shake 1-GEN head, indicate not agree
'I shook my head, indicating that he did not agree.'

c.**wo *yao* ***ta-de tou***, *biaoshi bu tongyi*
I shake 3sg-GEN head, indicate not agree
'I shook his/her head, indicating that he did not agree.'

Compared with the a-sentences, the b-cases are unequivocally unacceptable due to the presence of the understood ownership specifications. In the c-cases, the body-part objects are not co-referential with the subject. This would ordinarily warrant an overt representation of the possessors of the body-part objects. However, because of the semantic property of the verbs, the body-part objects must be co-referential with the subjects. This condition is not met in the c-cases and hence the sentences are unacceptable. Nevertheless, depending on how intrinsically a body-part object and its verb are involved, it is possible for the possessor of a body-part object not to be co-referential with the subject. Of the three verb-object pairs featured in (30) and (31), 'wash' and 'face' are the least intimately bound. Thus, it is possible to conceptualize a situation in which the body-part object is clearly distinct from its agent subject. For example, one can wash one's child's face. (30c) is acceptable on this account. In the case of (31c), the contextual information, *biaoshi bu tongyi* 'to indicate not agree', determines that the one who did not agree is necessarily the one who performed the head-shaking. Given the meaning of the verb 'shake' when connected with a body-part object, the possessor of the body-part object has to be co-referential with the subject. The sentence is expected to be unacceptable with such co-referentiality disregarded. Notwithstanding the restriction against overtly specifying owners of body-part objects that are co-referential with the subjects, discourse considerations of various kinds can override this restriction. Below, I give a case in point.

(32) *wo*$_i$ *budan xi-le* ***ziji-de shou***, *[e]*$_i$ *hai xi-le* ***haizi-de shou***
I not:only wash-PFV self-GEN hand, also wash-PFV child-GEN hand
'I not only washed my own hands, but also the child's.'

Of the two parallel clauses in (32), the first one features a body-part object whose possessor is co-referential with the subject, whereas the second has a body-part object whose possessor is not so related to the subject. The

respective possessors must be overtly specified simply because they are the intended objects of comparison.

Unless there is a discourse need of some kind, understood possessors are grammatically suppressed. The extent of this convention is evidenced by the many stock expressions with incorporated body-part objects. Each of the two expressions exemplified below includes two body-part objects whose possessors can never be overtly identified. That is, for (33) and (34) to be acceptable, the possessor expressions must be excluded.

(33) *ta ji-de* ***zhua*** *(*ta-de)* ***-er*** ***nao*** *(*ta-de)* ***-sai***
3sg worried-EXT tweak (3sg-GEN)-ear scratch (3sg-GEN)-cheek
'S/He is so worried that he is ear-tweaking and cheek-scratching.'

(34) *wo xingfen-de* ***mo*** *(*wo-de)-****quan*** ***ca*** *(*wo-de)-****zhang***
I excited-EXT rub (I-GEN)-fist wipe (I-GEN) -palm
'I am so excited that I am fist-rubbing and palm-wiping.'

Expressions such as *zhua-er nao-sai* (an indication of nervousness) and *mo-quan ca-zhang* (an indication of eagerness) are fixed not only in the sense that the objects must always be compounded with their verbs, but also in that the two compounds in each expression must always come together. Thus, for (33)' to be acceptable, both of the O-I constructions must be included. The same applies to (34)'.

(33)' *ta ji-de* ****(zhua-er)*** ***-*(nao-sai)***
3sg worried-EXT (tweak-ear) - (scratch-cheek)

(34)' *wo xingfen-de* ****(mo-quan)*** ***-*(ca-zhang)***
I excited-EXT (rub-fist) - (wipe-palm)

3.4.5. Reflexive Objects

Another type of highly referential object that exhibits a great tendency to incorporate is the reflexive. Given that a patient coded by a reflexive is understood as the semantic copy of the agent entity, it follows that an action performed reflexively ultimately affects the agent itself. This is another case of referential object that is non-distinct from its subject.

Before presenting examples, it is necessary to provide some pertinent information about reflexives in Mandarin. First, there are three variants of the reflexive morpheme. When it is an autonomous syntactic constituent, it is realized as *ziji*. When it is verb-incorporated, it is either *zi*, if the verb is monosyllabic, or *ziwo*, if the verb has two syllables. Secondly, unlike O-Is examined earlier in which the O follows the V, a reflexive object can be a preverbal clitic. With this much background information, (35) and (36) are some commonly occurring O-Is with the reflexive object:

(35) ***zi****-jiao / -jiu / -wei / -sha / -ze / -zhi*
self-spoil / -save / -defend / -kill / -reproach / -control

(36) ***ziwo****-anwei / -fanxing / -piping / -xinshang / -xisheng*
self-console / -question / -criticize / -appreciate / -sacrifice

A reflexive is used as an independent DO when its referent is construed as the mind or the body distinct from the being. For example, in (37a), *ziji* 'self' can be understood as either the mind or the body of the matrix subject referent *ni* 'you'. It is individually identified for the sake of the following sentence. (37b) is unacceptable because the morphosyntactic status of the reflexive does not match its discourse role, which is important by virtue of being referred to again in the following clause. The reflexive in (38a) is also salient, being an object of comparison, and hence must be represented as an independent object. (38b) is unacceptable since an I-O *ziwo* 'self' is not adequate to be compared to an independent DO *bieren*.

(37) a. *ruguo* ni_i *bu zunjing* ***ziji***$_i$, *shui hui zunjing* ***ni***$_i$ *ne?*
if you not respect self, who can respect you QUES
'If you don't respect yourself, who will?'

b.* *ruguo* ni_i *bu* ***zi***$_i$*-zun, shui hui zunjing* ***ni***$_i$ *ne?*
if you not self-respect, who can respect you QUES

(38) a. *ta budan piping-le* ***ziji*** *ye piping-le* ***bieren***
3sg not:only criticize-PFV self also criticize-PFV other:people
'She not only criticized herself but also criticized others.'

b.* *ta budan* ***ziwo****-piping-le ye piping-le* ***bieren***
3sg not:only self-criticize-PFV also criticize-PFV other:people

3.4.6. Reciprocal Objects

Like the reflexive, the reciprocal also has three variant forms. Both *hu* and *xiang* are truncated forms of *huxiang*. Being a disyllabic form, *huxiang* invariably occurs with disyllabic Vs, while both of the truncated forms can be compounded with monosyllabic Vs. A more important property of reflexive objects, which is also shared by reciprocals objects, is their clear referentiality. This being the case the analysis on reflexive objects applies to reciprocals. The following are some common O-Is featuring the reflexive.

(39) ***hu****-bang* / *-bu* / *-fang*
each:other-help/ -complement / -visit

(40) ***xiang****-di* / *-yue* / *-yi*
each:other-offset/ -invite / -depend

(41) ***huxiang****-bangzhu* / *-feibang* / *-konggao*
each:other-help / -slander / -accuse

While a reflexive object can be construed as the mind or body of a being in such a way that they are conceptually distinct from the being itself, such a construal is not possible with reciprocal objects. The fact that reciprocal objects in Mandarin can never be granted independent lexico-syntactic status but must always be incorporated can be observed in (42). Neither the *ba*- nor the V#O constructions is possible with the reciprocal object.

(42) a. *tamen* ***huxiang****-chuipeng-le yi-tong cai ru zheng ti*
They each:other flatter-PFV one-CL only:then enter real subject
'They started the real subject only after some mutual-flattering.'

b.* *tamen chuipeng-le* ***huxiang*** *yi-tong cai ru zheng ti*
they flatter-PFV each:other one-CL only:then enter real subject

c.* *tamen ba-* ***huxiang*** *chuipeng-le yi-tong cai ru zheng ti*
they BA- each:other flatter-PFV one-CL only:then enter real subject

3.5. SUMMARY

To determine the factors underlying the morphosyntactic contrasts among Mandarin DOs, I have examined some of the most typical uses of the

ba- and O-I constructions. The uses of the *ba*-construction observed in 3.3 have been analyzed as being necessitated by the within-clause elaborations on the extent to which patients are affected. The uses of the O-I construction observed in 3.4 have been analyzed as being warranted by the relatively entrenched semantic contiguity between certain types of patients on the one hand and their agents or the involved actions on the other. At this point, the two constructions do not seem to submit themselves to any unified characterization, as one is apparently correlated with high degree of affectedness whereas the other with low degree of individuation on the part of the patient. However, it is not unreasonable to carry the analyses one step further and argue that the relationship between affectedness and individuation is essentially one of mutual entailment. Thus, the fuller a patient's affectedness is perceived, the more it appears to be standing out from its environment; or, conversely, the less its individual identity is recognized, the less its affectedness will be observed. Emerging from this analysis is a continuum of affectedness/individuation, which sums up the uses of the *ba*- and O-I constructions observed in this chapter in a unified and principled way. Towards one end of the continuum cluster *ba*-marked DOs featuring patients whose affectedness is perceived in full and whose individuation is necessarily elevated. Towards the other end gravitate verb-incorporated DOs representing patients which are not attended to as individual entities and which are therefore perceptually unavailable for observation regarding the extent of their affectedness. In the middle of the continuum expect to fall the morphosyntactic "norms", DOs in the V#O construction, portraying patients that are not significantly high or low in individuation/affectedness.

Although the morphosyntactic contrasts among the DOs examined in this chapter can be ascribed to differences in degrees to which their referents are individuated and affected, affectedness and individuation are not inherently high or low in a DO referent. While a patient by definition is affected, how much it is affected is a matter of perception (not to ignore some conventional perceptual patterns). Also a matter of perception is how distinct a patient entity is, since an entity by nature has its individual identity. Perceptions of this kind, I believe, are functions of attention control on the part of the speaker. Thus, the more attention that is directed to a patient, the

more individually prominent will be that patient, and the more conspicuous will be its affectedness. Of course, a speaker's attention control is mediated by his saliency construal. It thus seems perfectly natural that affectedness elaboration becomes less and less permissible down the affectedness/individuation continuum as patient entities become less and less salient. In light of this argument, the fact that the various extent expressions observed in 3.3 which obligatorily select the *ba*-construction should be understood as circumstantial evidence supporting the grounding hypothesis.

As important and viable as it is for demonstrating the relationship between the morphosyntax of the DO and the speaker-imposed saliency of the patient, the affectedness/individuation continuum sketched above is not to be equated with the discourse grounding mechanism proposed in the last chapter. The affectedness/individuation analysis is based on whether or not a given morphosyntactic form of the DO is grammatically compatible with some expression that specifies the degree to which the DO referent is affected/individuated. Such compatibility is necessarily determined within the minimal context, the clause. The grounding analysis, on the other hand, must be carried out in a larger context, the discourse. Indeed, the very notion DISCOURSE GROUNDING means that the grounding mechanism is first and foremost a discourse property. Although the affectedness/individuation continuum supports the hypothesis that grounding is part of the Mandarin grammar, the grounding mechanism itself cannot be validated simply in terms of how affected/individuated a patient is overtly indicated within its containing clause. To prove that locally coded affectedness/individuation is the effect, not the cause, of grounding, it is necessary to compare the discourse distributions of the three constructions without any within-clause coding that obligatorily selects one construction to the exclusion of the others. This way, the grounding mechanism can truly be established as a set of devices which Mandarin speakers use differentially for discourse purposes. In the next three chapters, the hypothesized grounding relations are empirically validated.

CHAPTER FOUR. EMPIRICAL VALIDATION

METHODOLOGICAL PRELIMINARIES

4.1. INTRODUCTION

In outlining his approach to the study of syntax, Givón maintained that "while the study of sentences in isolation is a necessary preliminary step in identifying the inventory of coding devices which make morpho-syntactic structure, the goal of the investigation is to elucidate how those devices are used in coding and communicating knowledge." More specifically, the goal is to discover the context in which certain morphosyntactic structures occur, the purposes of their occurrence, and "how often they occur in comparison with other constructions that seemingly perform 'the same' or similar function(s)" (1984, p 10-11). Such is also the goal of the present research. Thus, having identified the V#O, *ba*- and O-I constructions as grounding devices in the last chapter, I now observe the discourse distribution of these constructions.

Because the investigation involves quantification and statistical or probabilistic analysis, the specific purpose of this chapter is to lay out the methodology for observing and analyzing Mandarin speakers' differential use of the three object-containing constructions in natural discourse. Outlined in 4.2 is the basic analytical system wherein I specify the context, scope and focus for the observation and analysis. In order to compare the three object-containing constructions in terms of the assumed grounding relationships, it is necessary to keep all other considerations constant. Major syntactic factors which obligatorily select one or two of the three constructions are discussed in 4.3. Although these factors are not necessarily incompatible with the grounding mechanism, they nevertheless restrict speaker's choices. For comparability among the three constructions at the discourse level, such factors are treated as confounding. Thus, every direct object entering the database must be equally acceptable in all three of the morphosyntactic forms as far as the syntax of its containing clause is concerned. Finally, the criterion for extracting appropriate information from the data are articulated in 4.4. These criteria are independently motivated, as a measure against non-

falsifiability and circularity of definition. On the basis of these criteria, a general hypothesis will be formulated.

4.2. ANALYTIC CATEGORIES

In this section, I spell out the analytical system by which pertinent observations and analyses will be made. In studies of discourse grounding, it is almost a tradition to treat grounding as a binary notion and the event as the most basic unit of analysis. It is also customary to assume, rather than define, such analytical categories as the context, scope and unit of analysis. However, I believe that these categories are theory specific and, perhaps, language specific notions. It is necessary, therefore, that I operationally define these analytical categories both with respect to the theoretical assumptions underlying the grounding mechanism and in the context of Mandarin.

4.2.1. Narrative Discourse as the Data Source

Narrative is generally considered to be the most suitable context for discourse grounding studies (cf. Chafe, 1980; Jones & Jones, 1979; Prideaux & Stanford, 1990; inter alia). I will also validate the grounding hypothesis within Mandarin narrative. Rather than following suit, however, I will justify the choice on both theoretical and methodological grounds.

It is perhaps uncontroversial that different genres of discourse are best analyzed along different discourse dimensions. For example, expositions, such as academic theses, are perhaps most appropriately studied in terms of thematic structure, for, as Longacre (1968) has argued, expository prose is defined by its prominent orientation to subject matter. In comparison, the descriptive discourse, which is shaped primarily by memory factors constraining information processing (Shanon, 1984), should be observed first and foremost for given-new information patterning. Of course, no single discourse factor is solely responsible for the organization of any one genre, and therefore no discourse genre can be thoroughly analyzed in terms of any one factor. Nevertheless, not to ignore such factors as topicality, givenness, etc., I contend that narrative discourse can be most profitably approached along the saliency dimension. This contention is based on the "evaluative"

property of narratives (Labov & Waletzky, 1967, p. 13). Labov (1972) adeptly characterized the evaluative nature of narrative as the "so what" factor. According to him, there are many ways to tell the same story, to make very different points, but if a sequence of clauses makes no point at all, that is, when it is "met (in English) by the withering rejoinder, 'So what?'", it is not a narrative, at least not a successful narrative (p. 366). Generally speaking, though, evaluation inevitably happens in narrative discourse, for speakers, and hearers alike, cannot help making judgments about what they are relating, about the events and the entities therein. The proposed grounding mechanism appeals exactly to this constantly shifting evaluative property of narrative discourse. The validity of the grounding mechanism must therefore be assessed in terms of how successfully it captures Mandarin narrators' propensity to evaluate patient entities of transitive events, and how revealingly it characterizes the narrators' use of evaluative means. Of course, evaluation can be conveyed linguistically in many ways, e.g,. through intonation, explicit comments, etc. The present study is directed specifically at the morphosyntactic devices, leaving all others as secondary.

The theoretical rationale aside, there is a methodological motivation to choose narrative discourse as the data source for the empirical study. By the commonly accepted characterization, a piece of narrative is usually composed of two types of events, those which are on the main story line, i.e., those that succeed one another in the same order as their succession in the real world, and those which are not (Labov, 1972; Grimes, 1975; Hopper & Thompson, 1980; Longacre, 1983). While on-line events comprise the substance of the narrative, off-line events merely add supportive material. This property of narratives provides an independent analytical criterion, *event sequentiality*, by which the saliency status of patient entities can be evaluated, at least initially. Thus, whether or not a patient entity is presented as part of an in-sequence event can provide some information as how salient that entity is conceived of by the narrator.

A piece of narrative discourse is the narrator's account of a sequence of events which he or she has conceptualized. The ultimate purpose of the narrator is to promote a reconstruction of her conceptualization in the

hearer's mind. Although the same sequence of events may be conceptualized differently by different narrators, the array of morphosyntactic techniques used to convey the same conceptualization is presumably consistent across speakers of the same language, for otherwise there would be no coherence in the reconstructed mental representations and, more relevantly there would be no communication as we know it. Without this premise, empirical studies would not be viable. Nevertheless, given that there is no direct access to speakers' conceptualizations in general and to their evaluations of patient entities in particular, one can only approximate such conceptualizations and evaluations by examining the correlations between the narrative techniques used and the discourse effects achieved thereby. The proposed grounding mechanism must therefore stand or fall on the strength of the correlations between the identified morphosyntactic devices and the resulting effects which are independently definable in actual narrative discourse.

It is important that I point out at the outset that because the present investigation is carried out in the context of narrative discourse, no cross-genre generalizations are claimed. Thus, when I speak of discourse functions of the three object-bearing constructions, I am talking about their functions within a particular type of discourse.

4.2.2. Episode as the Analytic Scope

Although temporal sequentiality of events is characteristic of narrative discourse, not all events in a narrative need to follow the same temporal sequence. A story may be developed along several temporal lines. It is often the case, though, that events following the same temporal sequence also share the same scene, or spatial setting, as well as the same participating characters. Events which are related by these three parameters, time, location and protagonists, constitute the EPISODE (cf. Grimes, 1975; van Dijk & Kintsch, 1983; Tomlin, 1986). On the basis of this characterization, a change in any one of these three parameters, i.e., a change in temporal or spatial setting or a gain or loss of major characters, is recognized as the episode boundary.

The episode provides a well-defined analytical scope within which the saliency status of patient entities can be plausibly measured. In terms of story

plot, the episode is self-contained. A patient entity construed to be salient in one episode need not be conceived of as equally salient in another episode. Indeed, the saliency status of a patient entity as construed in one episode may not hold in the next. That entity may simply not be there. Even if it is, its saliency status is often reinstated or re-evaluated under different circumstances. Moreover, saliency construal is essentially a cognitive process of attention allocation or "controlled processing", to use the terminology of Shiffrin and Schneider (1977). Unlike "automatic processing" which progresses with little conscious control from the speaker, a higher-order cognitive process of attention allocation demands the speaker's immediate consciousness. Because the immediate consciousness is limited in capacity, the particular attention paid to a given patient entity in one episode is not expected to be sustained in the next. As a consequence, the saliency status of a patient entity established in one episode cannot be retained automatically in the next episode. In light of what is known about the organization of narrative discourse as well as the workings of human attention, pertinent observations on the saliency status of patient entities must be made relatively locally within the scope of the episode.

4.2.3. Event as the Analytic Unit

Of course, the notion patient is relevant to the notion event which in turn is relevant to the notion episode. For operational purposes, EVENT is here understood as a basic unit of discourse which corresponds to the proposition in semantic terms and to the clause in syntactic terms. A proposition is further defined as a semantic unit which is composed of a predicate and its arguments and about which a true or false judgment can be made, and the clause is further characterized as a syntactic unit that contains a verb and its grammatical relations. The proposition is generally considered a basic unit of information (Clark & Clark, 1977; Carroll, 1986; Anderson, 1990). While such information is usually conveyed by the clause, what the clause usually conveys, in discourse, is the speaker's conceptualized version of that information. Because speakers have the propensity to conceptualize the same event in different ways, there are in grammar different clause structures that can be used to convey the same propositional information in different ways.

Event is immediately relevant to the empirical study designed here. First of all, it is in the conceptualization of event that speakers actually impose more or less saliency on the patient. In other words, object-grounding is effected in the construal of event. Secondly, because event is frequently realized as a clause, the structuring of the clause provides direct information on how a particular event is construed and, more specifically, how saliently the patient of that event is treated.

Although the event can be used as the basic unit for analyzing narrative discourse, not all events in a narrative have direct bearing on the validity of the proposed grounding mechanism, which is intended specifically to capture the cognitive-functional underpinnings of the morphosyntax of direct objects. Thus, I concentrate on events with patients which involve patients, but will refer to those which do not for information regarding event sequentiality. Furthermore, an event entering the study should be coded by one of the three basic clause structures, the V#O, *ba-* or O-I, for after all, it is in these constructions that the morphosyntactic contrasts among Mandarin direct objects are manifested.

4.2.4. Patient as the Analytic Focus

Unlike many of the grounding studies which are directed at events in narratives (Hopper, 1979; Tomlin, 1985; DeLancey, 1987, Prideaux & Stanford 1990, inter alia), the present study is focused specifically on patients of events. I argued in Chapter Two that the building blocks of the discourse grounding mechanism in Mandarin were patients that were realized as direct objects of various morphosyntactic forms. The assumption is that, while grounding mechanisms may exist in all languages, they can differ in shape and size according to the typological features of specific languages. One of the most important features of Mandarin Chinese is that the description of the sentence must necessarily include the element *topic*. The fact that, in the syntax of Mandarin sentences, the topic is better-defined and plays a more important role than the subject defines the language typologically as topic-prominent, in contrast to, say, English which is subject-prominent (Li & Thompson, 1976; 1981). How this typological feature bears on the choice of the analytical target becomes immediately obvious when one takes into

account two interacting factors: the basic word order of the language and the structural position of the topic. The fact that Mandarin is an SVO language, at least statistically, and the fact that Mandarin topics occupy the sentence initial position should mean that a great number of subjects are also topics. Given that "the subject of a sentence in Mandarin is the noun phrase that has a 'doing' or 'being' relationship with the verb in that sentence" (Li & Thompson, 1981, p. 87), the relative discourse importance of the agent/subject is essentially a topicality issue, relatively independent of the saliency status of the patient/object.

To the extent that the relative importance of the agent is independent of the patient, the relative saliency of the patient is construable irrespective of the agent. This argument appeals to an assumption of grammar which holds that "semantic structure is not universal; it is language-specific to a considerable degree" (Langacker, 1987, p. 2). Underlying semantic structures are conceptual schemes or patterns, which are essentially culture-specific. Thus, for example, Tai (1984, 1989) and Hsueh (1989) conclude from a series of comparative studies that, in presenting an event, English tends to be weighted toward the beginning point and is hence more ready to profile the agent, whereas Chinese is apt to give more attention to the end point and is therefore more ready to profile the patient. In other words, "given the same situation, English is more interested in finding out who does what, while Chinese is more concerned with what has happened" (Tai, 1989, p. 199). Because agent is such a part and parcel of the English conceptual scheme, it is seldom left out of English speakers' event construal. For the Chinese conceptual scheme, on the other hand, the agent is not so indispensable, and it is possible in Chinese to tone up or down the role of the patient while holding the conceptual status of the agent constant.

Indeed, it is possible in Mandarin to impose more or less saliency on the patient while keeping the predicate constant, too. In an abstract sense, the predicate is there obligatorily regardless of how the patient is construed in terms of discourse saliency. This is perhaps another relevant aspect of the Chinese conceptual scheme: actions per se allow little chance for alternative profiling, as evidenced by the fact that there is little verbal morphology in

Mandarin. This means that actions in Mandarin can stay conceptually neutral while the patient can be construed with more or less salience.

I have now specified the analytical categories for the validation of the proposed grounding mechanism. To sum up, patients of events are the focus of the study; because patients take on different degrees of saliency during the conceptualization of the events in which they are involved, the event is the basic analytical unit; the discourse statuses of both patients and events are to be determined within the scope of the episode; and the investigation will be carried out in the context of narrative discourse. In order to determine the grounding effect in discourse, should there be any, the morphosyntactic contrasts among the direct objects in the database must not be attributable to factors which obligatorily select one or two of the three constructions. I survey some of these factors in the next section to justify the decision that a direct object is a qualified data point only if it is able take all three of the morphosyntactic forms under study with the rest of the clause kept constant.

4.3. DATA SELECTION AGAINST CONFOUNDING

Although the present investigation targets patients of narrative events, not all patients observed in the narrative samples will be included in the analytic database. A patient is counted as a data point only if it can take all three of the morphosyntactic forms under comparison, and only if the resulting sentences are equally acceptable. This prerequisite is necessary because the purpose of the investigation is to find out what motivates the choice of one morphosyntactic form over the other two when all three are possible. In presenting the typical uses of the *ba*-and O-I constructions in the last chapter, I discussed some factors (e.g, elaborations on the extent of affectedness). Those factors are optional as far as the truth condition and the syntax of the clause are concerned. However, if they are present in the clause, at least one of the three morphosyntactic forms is not possible. Thus, as much as they seem to support the grounding hypothesis, clauses involving those factors are not included in the database. Also to be excluded are cases presented below. These cases involve factors that restrict direct objects to one or two of the three morphosyntactic forms for apparent clause-internal

reasons. These factors, unlike those observed in the last chapter, are necessary part of the clause, syntactically speaking.

INDIRECT OBJECT. Let me begin with the indirect object factor. First of all, not all indirect objects constrain the morphosyntactic freedom of the direct objects in the same sentences. In (1), the direct object 'flowers' can occur in all three of the morphosyntactic forms in the presence of the indirect object 'me' with equal acceptability. The direct object would thus be counted as a qualified data point.

(1) a. *ta gei **wo** song-le yi-shu huar*
3sg to me send-PFV one-CL flower
'He sent me a bunch of flowers.'

b. *ta ba- yi-shu huar song-gei-le **wo***
3sg BA-one-CL flower send-(to)-PFV me
'He sent me a bunch of flowers.'

c. *ta gei wo song-huar-le*
3sg to me send flower-PFV
'He sent me flowers'

In contrast, the direct object 'good news' in (2) does not qualify as a data point since it can occur only in the V#O construction (2a) or *ba*-construction (2b) but not in the O-I construction (2c). Strictly speaking, it is not the presence of the indirect object that constrains the direct object in terms of its morphosyntactic form, as the absence of it does not render the c-sentence acceptable, either. In fact, none of the three sentences can stand without the presence of the indirect object.

(2) a. *wo gaosu-le ***(muqin)** yi-ge hao xiaoxi*
I tell-PFV (mother) one-CL good news
'I told Mother one piece of good news.'

b. *wo ba- yi-ge hao xiaoxi gaosu-le ***(muqin)***
I BA- one-CL good news tell-PFV (mother)
'I told Mother a piece of good news.'

c.* *wo gaosu-xiaoxi-le ***(muqin)***
I tell-news-PFV (mother)

The verb *gaosu* 'tell' always requires an overt indirect object, and the indirect object must immediately follow the verb. This makes it impossible for the

direct object and the verb to be structurally close enough for incorporation to take place. The direct object 'good news', therefore, would not be considered a qualified data point even if it is actually observed in well-formed sentences like (2a) or (2b) with the indirect object present.

ASPECT-MARKING. Here are some observations on how grammatical aspect affects the morphosyntactic freedom of direct objects. Perfective aspect is compatible with all three of the morphosyntactic forms. It can be attached to either mono-morphemic verbs in the V#O and the *ba*-constructions or to the object-incorporating compound verbs. The distribution of the perfective aspect marker *-le* does not constitute an issue. However, only two of the three constructions can take the durative aspect, and only one is compatible with the experiential aspect. Thus, objects in clauses involving the durative aspect or experiential aspect will not be analyzed

There are two durative aspect markers in Mandarin: *zai* and *-zhe*. *Zai* is an independent lexical item that goes in front of the verb, while *-zhe* is a post-verbal clitic. Given an action denoted by a verb, *zai* seems to profile a smaller portion of the action, which is consequently rendered more dynamic; *-zhe* covers a larger portion of it, which is rendered less dynamic. Whereas the question of why the grammar of Mandarin needs two durative markers is in itself of great interest, it does not bear directly on the issue under consideration. It is only relevant to note that *zai* never goes with the *ba*-construction, while *-zhe* never goes with object-incorporation, although both are compatible with the V#O construction. The complementary distributions of the two durative aspect markers are illustrated in (3) and (4).

(3) a. *yi-jia hongzhaji* ***zai*** *zha na-zuo tie qiao*
one-CL bomber DUR bomb that-CL iron bridge
'A bomber is bombing that iron bridge.'

b.* *yi-jia hongzhaji* ***zai*** *ba- na-zuo tie qiao zha*
one-CL bomber DUR BA- that-CL iron bridge bomb

c. *yi-jia hongzhaji* ***zai*** *zha-qiao*
one-CL bomber DUR bomb-bridge
'A bomber is bridge-bombing.'

(4) a. *fuqin jinjin-de zhou-**zhe** meitou*
father tightly-ADV knit-DUR brow
'Father is knitting his brows tightly.'

b. *fuqin jinjin-de ba- meitou zhou-**zhe***
father tight-ADV BA- brow knit-DUR
'Father is knitting his brows.'

c.**fuqin jinjin-de zhou-meitou-**zhe***
father tight-ADV knit-brow-DUR

Thus, a direct object whose verb is marked for durative aspect, whether the aspect marker is *zai* or *-zhe*, would not be included in the database, for it cannot be accommodated in all three of the constructions with the same durative aspect marker.

Less complicated is the use of the experiential aspect, which denotes something about the past experience of the agent. It is probably because this grammatical aspect bears most directly on the agent, the role of the patient becomes something of a non-issue. And it may be due to the attention allocation to the agent that the patient loses its susceptibility to alternate profiling. Thus, the presence of the experiential aspect marker *-guo* prevents the direct object from occurring in the *ba*-construction or from being incorporated, as (5b) and (5c) demonstrate.

(5) a. *wo diao-**guo** yu*
I angle-EXP fish
'I once had the experience of fish-angling.'

b.**wo ba- yu diao-**guo***
I BA- fish angle-EXP

c.* *wo diao-yu-**guo***
I angle-fish-EXP

Exactly how a given construction has been grammaticized for accommodating a certain piece of aspectual information is not a direct concern here. What is important is only the fact that neither the experiential nor the durative aspects are equally compatible with all three of the object-containing constructions. The fact that they do not occur in all three of the constructions does not mean that they contradict the grounding hypothesis. In fact, they provide an independent support for the grounding mechanism.

Take (5) for example, the experiential aspect indicates that what is under discussion is not a particular event, but a general activity. That being the case, the patient entity cannot be given individual attention so that the activity can be perceived as a whole. In order to discover the conceptual-functional underpinnings of the three constructions, it is necessary to keep everything else constant. In this spirit, no direct objects occurring in sentences which are marked with either of these two grammatical aspects will enter the database.

THE ZERO-ANAPHOR CASE. Finally, I present rationales for not counting zero direct objects as data points. "A salient feature of Mandarin grammar is the fact that noun phrases that are understood from the context do not need to be specified" (Li & Thompson, 1981, p. 657). In other words, referents of given information do not need to be overtly represented. Such referents are commonly called zero pronouns, with "zero" indicating "absent" or "omitted", and "pronoun" suggesting "definite", referential" or simply "given". The following discourse contains such referents, signalled with [e] in the original sentences and underlined in the English translation.

(6) i. *nei-zhi xiao gou$_i$ hen you lingxing*
that-CL little dog very have intelligence

ii. *[e]$_i$ weiba zongshi yao lai yao qu,*
tail always waggle here waggle there

iii. *[e]$_i$ feichang keai,*
extraordinary lovable,

iv. *suoyi wo jiu maixia-le* ***[e]$_i$***
so I then buy-PFV

'That little dog was very intelligent, its tail was always waggling, it was extraordinarily lovable, so I bought it.'

Strictly speaking, there is little relevance of the overt vs. covert coding of new vs. given referents to the discussion of the proposed grounding mechanism. Whether a referent is given or new has to do with the discourse context, but whether it is salient or non-salient has to do with the speaker, or rather, the speaker's conception of its discourse role. The point is that what is

new is not necessarily salient or non-salient, nor is what is salient necessarily new or given. The two sets of notions must be discussed separately.

Regardless, not all referents carrying given information are coded with zero pronouns. In fact, given information can even be coded by lexical nouns or noun stems. To explain the distribution of zero and lexical pronouns, Li and Thompson (1981) argue that Mandarin speakers follow "a general guideline having to do with *highlighting*" (p. 662, emphasis is original). Although "highlighting" does not correspond exactly to what I mean by foregrounding, their point is well taken that the zero pronoun is used to code given referents only if the referents are not manipulated for other discourse effects. One type of effect, I believe, is discourse grounding, which for our purposes here is relevant only to referents of direct objects. Thus, for a direct object referent carrying given information, the zero pronoun is appropriate only if it is not conceived of as so salient or non-salient as to warrant foregrounding or backgrounding. By the proposed grounding mechanism, then, zero objects are ground-neutral.

Whatever discourse effect it may be used to achieve, the direct object in the *ba*-construction can never be a zero pronoun. (7b) is unacceptable without an overt direct object, no matter how given its referent is.

(7) a. *wo ba- **zhei-zhi xiao gou** maixia-le*
I BA- this-CL little dog buy-PFV
'What I did to this little dog was I bought it.'

b.* *wo ba- **[e]** maixia-le*
I BA- buy-PFV

From the syntactic point of view, (7b) is ungrammatical because *ba-*, which behaves like a preposition, is left stranded. But a more compelling reason is discourse-based. It is impossible to structurally promote and morphologically mark something that is not present in the first place.

Incorporated objects are never covert, either, for what can be omitted and subsequently recovered are necessarily noun phrases as opposed to noun stems. This analysis can be tested in many ways, one of which is provided by

the interaction between the verb and aspect markers. Ordinarily, aspectual information is associated with the lexical verb. Thus, for example, the perfective aspect marker *-le* is attached directly to the verb. When the verb incorporates its object, the aspect marker is suffixed to the V-O verbal compound as a whole, giving a V-O-*le* string. For the sake of the argument, if the O in the string dropped, leaving a V-*le* form, the aspectual marker *-le* would automatically restore a full lexical status to the V, and a full lexical verb, in turn, would automatically impose a full lexical status on the dropped O. An incorporated object is therefore not omittable.

Now that both *ba*-marked pre-verbal objects and verb-incorporated objects are obligatorily overt, only post-verbal independent direct objects can be coded by zero pronouns. If the former two types of objects are analyzed respectively as foregrounded and backgrounded, the latter is ground-neutral by default. In other words, whereas givenness is a factor in coding post-verbal independent direct objects, it is immaterial with respect to *ba*-marked pre-verbal objects or incorporated objects. In order to compare the saliency status of the object referents in the three object-containing constructions, it is necessary to hold the givenness factor constant. A principled way to offset potential confounds is by excluding zero objects from the database.[*] The exclusion of zero direct objects should not bear very much on the size of the database, for although zero pronouns are common in Mandarin sentences, they most often represent topics and subjects.

By the same argument, direct objects coded in the form of a lexical pronoun are not eligible data points. Whatever nuance of difference there may be between lexical and zero pronouns, it is sufficient for the purpose of the present study simply to note that while lexical pronouns can occur in the *ba*-construction, neither type can occur in the O-I construction. Again, this should not affect the size of the database because pronouns, especially third person pronouns, are rarely used in Mandarin (see p. 14, Ch. 1).

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1. Although zero direct objects are not counted as datapoints, they, as well as zero subjects, etc., will be used as references for determining the relative saliency of overtly coded direct objects.

In sum, because the present research is intended primarily to ascertain the discourse motivations for the differential use of the three object-bearing constructions, it is absolutely essential to hold constant all other factors which interact in different ways with the three morphosyntactic forms of direct objects. In light of this consideration, the database will include only those direct objects which are equally acceptable in all three of the morphosyntactic forms at the clause level.

4.4. ANALYTIC CRITERIA AND HYPOTHESIS

The development of the three-way distinction grounding mechanism has been motivated by an assumption that patients are coded differently in the clause depending on how salient they are conceived of in the discourse. Admittedly, such an assumption does not promise any ready and airtight methodology for testing the form-function coding relationships which the grounding mechanism characterizes. On the one hand, patients are not inherently salient or non-salient and hence deserve foregrounding or backgrounding. Instead, their relative saliency as well as the need for foregrounding or backgrounding them are matters of the speakers' subjective construal. On the other hand, however, there is no direct access to speakers' construals. That is, researchers cannot directly observe how much mental attention is being allocated to a given patient, how salient that patient is thereby conceived, and how necessary a particular grounding device is to be selected during the process of the discourse production. Researchers must devise some independent criteria by which speaker-imposed saliency status of patients can be reliably and accurately identified.

Such criteria are possible only because speakers' construals with respect to the saliency status of patients are ultimately reflected in discourse. Indeed, how salient an entity is conceived of would be of no linguistic relevance if it were not for the purpose of communication. Speakers deploy attention to or withhold attention from patients only to achieve certain discourse effects whereby their hearers' attention will be directed one way or another. It is reasonable to assume that speakers not only have the cognitive ability to impose different degrees of saliency on patients, they also have the

communicative intention to express their impositions by means of foregrounding, backgrounding, etc., so that their hearers can be well informed as to what is especially noteworthy and what is not. It is therefore quite possible to derive speakers' construals and their communicative intentions indirectly by observing the particular discourse effect brought about by the use of a particular grammatical structure.

The question now is how to identify various discourse effects and, ultimately, how to establish the grounding relationships empirically between the three morphosyntactic forms of Mandarin direct objects and the three degrees of discourse saliency that Mandarin speakers may regularly impose on patient entities. Of course, the discourse effects cannot be defined in terms of the grammatical structures that are assumed to produce the effects. That is, the discourse values of patient entities cannot be defined by the morphosyntactic forms of direct objects, for otherwise the asserted grounding relationships will be lost in circularity of definition. Furthermore, the saliency levels of patient entities cannot be defined based on the researcher's intuitions, for otherwise the asserted grounding relationships will suffer fatally from non-falsifiability. For the analysis to be sound and the empirical results valid, criteria for identifying various discourse effects, i.e., for defining the discourse values of patient entities, must be both syntax-independent and introspection-free, as Tomlin (1985) has so rightly pointed out. In what follows, I present two such criteria. These criteria, I believe, can provide a systematic and relatively reliable measure of the saliency status of patient entities as they are presented in discourse.

4.4.1. Event Sequentiality

Although the grounding mechanism being developed here pertains primarily to patients, information about patient-involving events may provide a good indication of the saliency status of the involved patients. In analyzing narratives, researchers generally distinguish events that are temporally sequenced from those that are not. To say that events are temporally sequenced is to say that they are narrated in an iconic ordering, such that "a change in the order of any two of them signals a change in the order of real-world events" (Hopper & Thompson, 1980, p. 281). In contrast,

out-of-sequence events are not aligned in a temporal order corresponding to the real-world event ordering. It has been commonly observed that in-sequence events form the substance of the narrative and move the discourse forward, whereas out-of-sequence events merely add non-essential information to the narrative and do not contribute directly to the development of the discourse. Depending on their discourse contribution, then, events can be evaluated as more or less important. Such importance is inevitably shared by the involved patients. A patient can therefore be evaluated as more or less salient depending on whether or not it is a part of an in-sequence event.

In articulating the operational scope for the investigation, I contended that event sequentiality must be defined locally within the scope of the episode. A narrative may contain a number of episodes, and there may be as many story lines as there are episodes. Events from different episodes do not follow one and the same story line. Therefore, an event is considered to be in-sequence if it is presented on the story line of its containing episode.

As a first approximation to the hypothesis which can be furnished with the sequentiality criterion, patients involved in out-of-sequence events are more likely to be backgrounded than those involved in in-sequence events. That is, because patients of out-of-sequence events are not as salient, direct objects coding these patients tend to be verb-incorporated. By default, patients of in-sequence events are more likely to be foregrounded by the *ba*-construction or left ground-neutral by the V#O construction. Thus, the sequentiality criterion distinguishes incorporated objects from objects that are morphosyntactically independent. This distinction is not accidental, for unless an event is important for the discourse, there is little need to recognize the individual identity of the patient entity involved in the event.

Unfortunately, the sequentiality criterion is not sensitive enough to further differentiate the pre-verbal *ba*-marked objects from the post-verbal independent objects. The lack of sensitivity is due to the fact that event sequentiality is inherently binary. Given that an event is either in-sequence or out-of-sequence, this criterion is adequate only when the notion saliency is

also considered to be binary (as it often is, cf. Hopper, 1979; Thompson, 1986; Prideaux & Stanford, 1990). Couched in terms of a three-way grounding distinction, however, discourse saliency is here understood to be more continuous. Thus, as fundamental as it is for analyzing narratives, the sequentiality criterion must be complemented in order to distinguish more than two levels of saliency. Below I present another criterion which, by singling out highly individuated entities, effectively distinguishes foregrounded referents from ground-neutral ones.

4.4.2. Textual Mention

It is reasonable to speculate that, in addition to the saliency value inherited from their involving events, patient entities can be more or less salient in their own right. In other words, whereas some patient entities are salient simply by virtue of being in in-sequence events, others can be more salient for their individual contribution to the discourse over and above the fact of being in in-sequence events. One way to measure a patient entity's own contribution is to observe how often its individual identity is referred to in the discourse. Everything else being equal, the more salient an entity is construed, the more individuated it will be perceived and, as a result, the more available its individual reference will be for further mention in the relevant discourse. By this criterion, the more frequently a referent is mentioned in the discourse, the more likely its individual identity will be highlighted. Of course, this statement presupposes that the individual identity of the referent is recognized in the first place. Thus, patients of in-sequence events tend to be presented in the *ba*-construction if they are frequently referred to in the relevant discourse; conversely, they would get encoded in V#O structures if they are seldom mentioned in the discourse.

Unlike the sequentiality criterion which intrinsically has two discrete values, the mention criterion must operate in relative terms. There are two reasons why the rate in which a direct object referent is mentioned cannot be measured in absolute terms. First of all, there is no objective standard by which high and low rates of mention can be determined a priori. How high is a high rate of mention and how low is a low rate must therefore be determined posteriorly by statistical means. Secondly, the mention criterion

should operate in relative terms in order to offset cross-episode and cross-speaker differences. As for the sequentiality criterion, the operational scope for the mention criterion is also the episode. Given that episodes may differ in length, a referent in a longer episode potentially has more chances of being mentioned than one in a shorter episode. It is thus not plausible to apply absolute standards across episodes. Furthermore, speakers may differ in terseness or wordiness, which may affect not only the length of episodes but also the rate of mention regardless of the length of episodes. Again, absolute values are not applicable across speakers. However, comparisons can be made on an episode-by-episode and speaker-by-speaker basis. Thus, for example, given an episode, the average rate of mention to object referents of one morphosyntactic form can be contrasted to the average rate of mention to object referents of another morphosyntactic form. Similarly, given a narrator, the number of times a direct object of one morphosyntactic form is mentioned can be compared against the number of times a direct object of another morphosyntactic type is mentioned.

Although the frequency-of-mention criterion has been motivated to distinguish object referents in the *ba*-construction from those in the V#O structure, the rationale behind the criterion is relevant also to incorporated ones. If it is indeed the case that the more salient a direct object referent is construed, the more frequently it is attended to in the relevant discourse, then the rate in which referents of incorporated objects are mentioned cannot be high. By the mention criterion, then, incorporated objects may very well align with post-verbal independent objects. Of course, such an alignment does not constitute a methodological problem because the two types of direct objects are already distinguished by the sequentiality criterion.

4.4.3. General Hypothesis

Individually, the two analytical criteria seem to be limited in that they each can distinguish only two levels of discourse saliency. Complementing each other, they should constitute an reliable measure which can effectively separate all three levels of saliency that are motivated by the grounding mechanism. As an operational definition of saliency in terms of this measure, a patient entity is salient if it is part of an in-sequence event and is

frequently attended to in its containing episode; it is less salient if it is involved in an in-sequence event but is attended to less often in its containing episode; and it is still less salient if it is in an out-of-sequence event and infrequently attended to. On the basis of this definition, a general working hypothesis can now be formulated: Mandarin speakers tend to use the *ba*-construction to foreground direct object referents which they present in in-sequence clauses and to which they make frequent reference in the relevant discourse; they opt for the V#O structure to keep ground-neutral object referents which they deliver in in-sequence clauses but of which they do not make frequent mention in the discourse; and finally they are likely to resort to the O-I construction to background direct object referents which they relegate to out-of-sequence clauses and to which they do not attend very frequently. This hypothesis is represented in the following construal-function-form correspondences, where the three levels of saliency vis-à-vis patient entities are defined by the sequentiality criterion and the mention criterion; the corresponding discourse functions are couched in terms of grounding specifications, and the three morphosyntactic forms O, *ba*-O and I-O represents direct objects in the V#O, *ba*- and O-I constructions respectively.

CONSTRUED SALIENCY		FUNCTION	FORM
Event	Mention	Grounding	Morphosyntactic
In-Sequence	Low Rate	Ground-neutral	O
In-Sequence	High Rate	Foreground	*ba*-O
Out-of-Sequence	(Low Rate)	Background	I-O

Table 4.1. Expected construal-function-form correlation.

It must be pointed out that the grounding relationships between the three degrees of saliency, as indicated by the three combinations of event sequentiality and rate of mention, and the three morphosyntactic forms are not meant to be absolute. Event sequentiality and rate of mention are no more than two indirect means to approximate speakers' attention allocation and saliency imposition thereby. As such, they are not expected to be absolutely sensitive to all the factors that may have gone into the speakers' saliency construal processes, which ultimately motivate the differential uses

of the object-containing constructions. What is hoped to be found in the present study, therefore, are clear tendencies (more than chance occurrences) that different morphosyntactic forms of direct objects are used with different combinations of event sequentiality and rate of mention in preference to grammatically possible alternatives. Depending on whether or not such patterns exist in the actual discourse, a conclusion can be drawn that Mandarin speakers do or do not regularly employ the three object-containing constructions to represent patient entities with three degrees of subjectively imposed saliency. The hypothesis that the three-way distinction grounding mechanism exists in the grammar of Mandarin Chinese must be supported or falsified accordingly.

4.5. SUMMARY

In this chapter, I have outlined an analytical framework for the purpose of data collection and analysis. By this framework, the data will be gathered from the narrative discourse; pertinent analysis will be carried out within the episode; and the analytical focus will be set on the patient of transitive event, rather than the event as a whole. I have also set the conditions by which relevant data will be collected. A patient is qualified to enter the database only if it can be represented in all three of the object-containing constructions while other sentence internal factors held constant. Finally, the two analytical criteria, event-sequentiality and rate-of-mention, have been adopted as independent measures of speaker-imposed saliency. With the methodological preliminaries set, I will turn to the empirical studies proper in the next two chapters.

CHAPTER FIVE. VALIDITY OF THE GROUNDING MECHANISM
A QUANTITATIVE ANALYSIS

5.1 INTRODUCTION

In this chapter, I report the first of the two empirical studies designed to test the validity of the form-construal grounding relationships formulated in the preceding chapter. This is a quantitative analysis of narrative discourse. After some explanation about how the data were collected and organized, I will present the statistical analyses of the data. The results of the analyses will be interpreted in light of the proposed discourse grounding mechanism as well as the theoretical assumption underlying it.

5.2. DATA COLLECTION AND ORGANIZATION

5.2.1 Data Sources

The data for this analysis were drawn from a corpus of 12 randomly sampled novels in Chinese. These novels were written and published over a period of seven decades. The coverage in dates of publication was meant to offset effects, if any, of chronological changes in the grammar. The concern arose from Li and Thompson's (1975) hypothesis that "Mandarin is currently undergoing an order change from SVO to SOV" (p. 185). As a related detail, the authors of the 12 narratives differed in age. Thus, the sampled narratives should have an average chance of being influenced by the chronological changes should there be any. The stories in the narratives were set in times extending across almost a century. This, again, should neutralize any chronological effects on the grammar from the different times in which the characters in the stories lived. Furthermore, the authors and their characters were from different parts of the country. If there were dialectal or regional differences, they should have been neutralized in the database. Given such a diversity in the data source, the form-function correlations under investigation should not systematically co-vary either with the narrators or with the narrations. The findings from this study may therefore be safely generalized to characterize Mandarin narratives.

5.2.2. Data Preparation

In laying out the analytical framework in the last chapter, I maintained that all the pertinent analyses be carried out within the scope of the episode. The narratives sampled for the study varied in the number of episodes they each contained. For ease of comparability, it was arbitrarily decided to extract 20 episodes from each of the 12 sample narratives to form the database. They were the first 20 episodes, each of which included at least one of the three object-containing constructions under observation.

All the occurrences of the three object-containing constructions in the 240 episodes were scrutinized for interchangeability. That is, every direct object in its original morphosyntactic form was examined to see if it could take the other two forms without affecting the grammaticality of the containing clause in a neutral context. Those that were not equally acceptable in all three of the morphosyntactic forms, as far as their containing sentences were concerned, were excluded from the database. In most cases, the acceptability judgment was simple and straightforward. In other cases where it was not, several opinions were solicited from other native speakers of the language. A total of 1577 direct objects were tallied as qualified data points for further analyses. The discourse distribution of these direct objects in the morphosyntactic forms chosen by the narrators, is presented in Table 5.1.

Narrative	V#O	%	*ba*-O	%	I-O	%	TOT.
1	112	62.22	25	13.89	43	23.89	180
2	97	71.85	16	11.85	22	16.30	135
3	53	49.07	11	10.19	44	40.74	108
4	97	67.83	10	6.99	36	25.18	143
5	117	54.67	17	7.95	80	37.38	214
6	85	69.11	18	14.63	20	16.26	123
7	55	57.89	15	15.79	25	26.32	95
8	120	74.07	12	7.41	30	18.52	162
9	83	61.48	21	15.56	31	22.96	135
10	73	77.66	12	12.77	9	9.57	94
11	50	60.24	15	18.07	18	21.69	83
12	66	62.86	10	9.52	29	27.62	105
SUM	1008	63.92	182	11.54	387	24.54	1577

Table 5.1. Distribution of DOs in three morphosyntactic forms in 12 texts.

Although they were free to take any one of the three morphosyntactic forms, the direct objects observed in the 12 narratives favored the O form, the post-verbal independent form in the V#O construction. Thus, of all the 1577 direct objects included in the database, almost 64% came from V#O sentences. By the hypothesis formulated in the last chapter, these should represent ground-neutral direct objects. Fewer I-Os, about 24%, were observed in the corpus. These are hypothesized to be backgrounded objects. Fewer still were *ba*-Os, about 11%, which are deemed to be foregrounded objects.

5.3 DATA ANALYSIS AND INTERPRETATION

5.3.1. Analysis and Results by the Sequentiality Criterion

The 1577 direct objects were subsequently analyzed by the sequentiality criterion. They were separated according to whether they actually occurred in clauses coding in-sequence events or in those coding out-of-sequence events. As stipulated earlier, in-sequence events in an episode were those that were narrated along the temporal story line, those which succeeded one another in such a way that a change in the order of any two of them would distort the natural sequence of the real-world events. By this definition, unrealized and to-be-realized events included in an episode were considered to be out-of-sequence, since they did not follow the main story line, nor did they succeed one another necessarily. Direct objects in clauses which contained auxiliary verbs, concessive, imperative or negating expressions were therefore analyzed as occurring in out-of-sequence events. For instance, of the eight events in the following episode, (a)-(e) and (h) were analyzed as in-sequence events, since a change in the order of any two of them would indeed distort their iconic ordering. On the other hand, (f), (g) and (i) were analyzed as out-of-sequence events, as they were neither temporally ordered with the other six in-sequence events nor ordered among themselves, simply because they did not take place.

(1) a.	*Baiqiuen tui-**men***	'Bethune pushed **the door** open
b.	*[e]* jin-lai	([e=Bethune]) entered.
c.	*Xü ganjin zhan qilai*	Xü quickly stood up

d. *[e] rang-**zuo**,*	([e=Xü]) offered **a seat**,
e. *you gei Baiqiuen dao-le **yi-bei re shui***	then [e=Xü] poured **a glass of hot water** for Bethune.
f. *Baiqiuen meiyou zuo,*	Bethune did not sit down,
g. *[e] ye meiyou he-**shui**,*	([e=Bethune]) did not drink **the water** either.
h. *[e] zhizhi-de shuo*	([e=Bethune]) straightforwardly said
i. *[e] bixü gei shangyuan fa-**bei**.*	([e=Xü]) must distribute **quilts** to the wounded.'

There were five direct objects in this episode. *Men* 'door' in (a), *zuo* 'seat' and *yi-bei re shui* 'a glass of hot water' in (e) were involved in in-sequence clauses, while *shui* 'water' in (g) and *bei* 'quilt' in (i) were in out-of-sequence clauses.

Following the same analysis, events which did take place but took place in episode(s) other than the one currently under analysis were also considered to be out-of-sequence. Events which were related by a character in the narrative, for instance, were not analyzed as being temporally ordered with those related by the narrator. Thus, direct objects in clauses of reported speech, as well as those in clauses within dialogues between characters were all identified as patients in out-of-sequence events.

The result of the analysis by the sequentiality criterion is given in Table 5.2, where the direct objects are presented in the morphosyntactic forms as they originally occurred in the sample narratives.

EVENT	O	*ba*-O	I-O	TOT.
In-Sequence	764	145	87	996
	75.79%	79.67%	22.48%	63.16%
Out-of-sequence	244	37	300	581
	24.21%	20.33%	77.52%	36.84%
SUM	1008	182	387	1577

Table 5.2. Distribution of DOs by the sequentiality criterion.

As a trivial point, Table 5.2 shows that clauses coding in-sequence events contained most (over 63%) of the direct objects in the corpus. It is of course intuitively plausible that there would be more patients involved in in-sequence events than there were patients involved in out-of-sequence events. After all, narratives are characterized for their temporally sequenced events. On the basis of the saliency definition afforded by the sequentiality criterion, then, 996 out of 1577 direct objects are analyzed as salient. What is more relevant and important to observe in Table 5.2, though, is the fact that most of the Os and *ba*-Os, almost 76% and 80% respectively, were found in clauses coding in-sequence events, but only a little over 22% of the I-Os were observed in clauses coding in-sequence events. The observed distribution of the direct objects in clauses coding in-sequence versus out-of-sequence events was quite in line with the expectations engendered by the sequentiality criterion. Thus, patients involved in out-of-sequence events were non-salient by definition and were therefore expected to be backgrounded in the object-incorporation construction. Patients involved in in-sequence events, on the other hand, were salient by definition and hence were expected to be either foregrounded with the *ba*-construction or left ground-neutral in the V#O construction. Of course, it is not desirable to lump the *ba*-Os and Os together. However, all that can be said at this point is that the morphosyntactic independence of these direct objects was granted in recognition of their referents being involved in in-sequence events.

In sum, the observed distributional differences among the three types of direct objects in the corpus support the grounding hypothesis on the basis of the sequentiality criterion. The question now is whether these differences are statistically significant to sustain the grounding relationships between morphosyntactic forms of direct objects and speaker-imposed saliency status of patients. Statistical tests were performed to answer this question.

At the outset, the actual counts coming out of the sequentiality analysis were all converted into percentages. This process was necessary because the three morphosyntactic groups under comparison were not equal in size, i.e., they did not contain equal number of data points. For each of the 12 sample narratives three sets of percentages were calculated. Thus, for example,

among the 20 episodes in the first sample narrative, 77.68% of the Os were from clauses coding in-sequence events while 22.32% are from clauses coding out-of-sequence events; 84% of the *ba*-Os were from in-sequence clauses while 16% were from out-of-sequence clauses; and 16.28% of the I-Os were from in-sequence clauses while 83.72% were from out-of-sequence clauses. Such percentages were used for subsequent statistical tests.

Since the statistical task was essentially to test the effects of narrators as well as their morphosyntactic choices for direct objects in clauses coding in-sequence (versus out-of-sequence events), a two-way analysis of variance was appropriate with Narrator and morphosyntactic Form as the two bases of classification. The percentage data were transformed into arcsin values in order to conform more closely to the assumptions underlying the statistical model.[2] The transformed data were then submitted to an ANOVA.

A two-way analysis of variance, with two replicates per cell, revealed a non-significant Narrator effect ($F(11,36)=.699$, $p=.7306$), indicating that the authors were consistent among themselves in the number of Os versus *ba*-O versus I-Os they used in their narratives for coding patients of in-sequence events. In addition, the narrators did not differ in their choices of morphosyntactic forms for direct objects in clauses coding in-sequence events, because the Narrator-by-Form interaction was also non-significant ($F(22,36)=.573$, $p=.9147$). Nevertheless, the main effect of Form was found to be highly significant ($F(2,36)=84.872$, $p<.0001$), clearly suggesting that the morphosyntactic forms of direct objects varied quite systematically with the sequentiality values of their containing clauses. With all other effects removed, the mean percentage choices of O, *ba*-O and I-O for patient entities in in-sequence events were respectively 60.52, 63.54, and 27.52. Figure 5.1 depicts the main effects of Form.

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2. Arcsin transformation (arcsin $\sqrt{\text{percentage}}$) is generally used when the observations obtained are proportions or percentages.

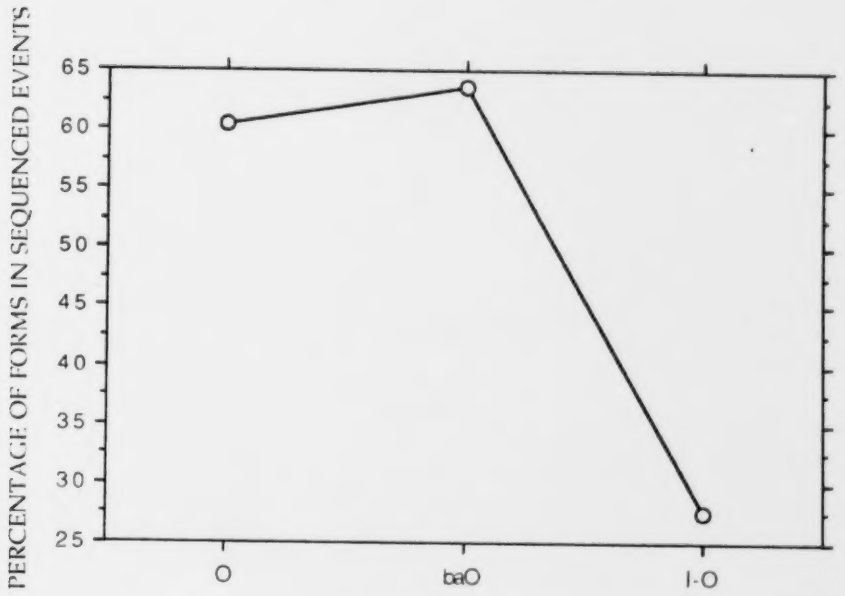

Figure 5.1. The main effects of Form.

To better gauge the effect of the morphosyntactic Form, i.e., to better evaluate the correlation between the morphosyntactic factor and event sequentiality, Scheffé's tests were performed for pairwise comparisons of the relevant means. As expected, no significant difference was found between the mean choice of the O form and that of the *ba*-O form (p=.6204). However, between the O and I-O forms, the mean choices differed significantly (p<.0001), so did the mean choices between the *ba*-O and I-O forms (p<.0001). Thus, the test aligned the *ba*-Os with the Os in contrast with the I-Os.

The overall statistical result generated by the sequentiality criterion indicates quite conclusively that the I-O form codes patients of out-of-sequence events. To the extent that the sequentiality criterion can measure the saliency status of patients, the statistical result has confirmed the hypothesis that Mandarin speakers do regularly background non-salient patients by means of object-incorporation. As for the O and *ba*-O forms, although neither seem to uniquely code patients of in-sequence events, neither appears to be a random choice. Given that Os and *ba*-Os are salient by

virtue of being involved in in-sequence clauses, the alignment between the two forms suggests that speakers tend to code salient patients as independent direct objects.

However, that is as far as the sequentiality criterion can go to validate the proposed grounding mechanism. Although it has adduced strong evidence supporting the coding relationship between the I-O form of direct objects and the non-salient status of patient entities, it cannot say much about the grounding specifications of the O and *ba*-O forms except that both can code salient patients. It thus remains an empirical question as to when patient entities of in-sequence events are foregrounded by the *ba*-construction and when they are kept ground-neutral in the V#O construction. This question is addressed next.

5.3.2. Analysis and Results by the Mention Criterion

The direct objects in the database were then analyzed by the mention criterion. The number of times each of the 1577 direct objects were referred to within its containing episode was recorded. The term MENTION is used loosely here, because a mention does not have to be a full word, nor does it have to have an overt representation. For example, if a direct object in one clause is referred to elsewhere in the episode in the form of zero pronoun, the zero pronoun is counted as one mention of that direct object. Of course, mentions of direct objects need not be direct objects themselves. They can be topics, subjects, oblique objects, etc, in their own clauses. If a mention happens to be a direct object, it need not be in the same morphosyntactic form as what it is referring to. For example, a mention of a full-fledged direct object may be an I-O, and vice versa. Furthermore, a mention of a direct object can be in its subsequent as well as preceding discourse as long as it is in the same episode as the direct object it is referring to. The episode exemplified in (2) contains some of these cases.

(2) a.	*ta da de hai shi* ***na-ba san***	'What she was holding was still **that umbrella,**
b.	***[e]*** *yijing jiu-le*	**([e]=the umbrella)** was already old
c.	*[e] jiushi she bu de reng* ***[e]***	([e]=she) just hated to throw out

	([e]=the umbrella).
d. [e] jin-le men ting	([e]=she) entered the entrance hall
e. *ba-* ***san****, shou-le*	at the door she closed **the umbrella**
f. *[e] dou-le-dou* ***[e]*** *shang-mian de shui*	([e]=she) shook the water off **([e]=the umbrella)** a bit,
g. *[e] xiaoxin de guahao* ***[e]***	([e]=she) carefully hang up **([e]=the umbrella).'**

In this episode, the eligible data entry is *san* 'umbrella' in (2e). It happens to be a *ba*-O, but it is equally acceptable in either the O form or the I-O form, as far as the grammar of the clause is concerned, i.e., not considering the context. It is mentioned for a total of five times elsewhere in the episode. The first mention, in (2a), is a part of the predicate. The second is the zero topic/subject in (2b). The zero direct object in (2c) is the third mention. The fourth is the zero possessive pronoun in (2f). And the fifth mention is the zero direct object in (2g).

Table 5.3 reports the average rate in which direct objects in the corpus were mentioned in the 240 episodes of the 12 narrative samples. The first row of the table contains all the direct objects (qualified data points) in the three morphosyntactic forms in which they occurred in the narratives. The second row gives the total number of times for which the direct objects in each of the three morphosyntactic forms were mentioned elsewhere in their relevant episodes. And the last row provides the rate in which direct objects of each morphosyntactic type were referred to elsewhere in their containing episodes.

	O	*ba*-O	I-O	TOT.
# of DOs	1008	182	387	1577
# of Mentions	906	491	198	1595
# of Mentions / DO	0.90	2.67	0.51	1.01

Table 5.3. Average number of times a DO is mentioned in its episode.

The point to observe is that the three morphosyntactic groups differed considerably by the rate-of-mention criterion. The *ba*-Os had the highest rate

of mention, an average of 2.67 times, while the I-Os had the lowest rate of mention, an average of 0.51 times. Of course, unless these differences are tested to be statistically significant, no correlation can be safely drawn between the morphosyntactic forms and rate of mention.

The average number of mentions which was calculated for each of the three morphosyntactic types were also submitted to an analysis of variance. Given that the consistency among the narrators on the rate-of-mention account was comparable to that on the event sequentiality account and also that there was no narrator-effect by the sequentiality test, a one-way classification was sufficient for the purpose here. The statistical test revealed a highly significant main effect, ($F(2,33)=95.985$, $p<.0001$), indicating clearly that rate-of-mention interacted quite systematically with the morphosyntactic forms. Figure 5.2 characterizes this interaction.

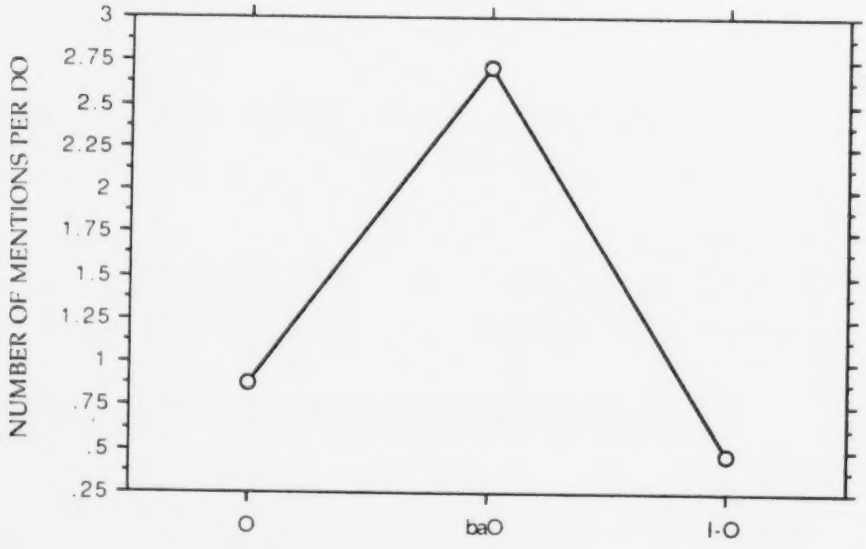

Figure 5.2. Form by mention correlation.

To locate the exact sources of the variation that resulted in the significant main effect, pairwise comparisons were subsequently carried out

by Scheffé's Test. The results were a significant difference ($p<.0001$) between the *ba*-O type and the other two types of objects, but a non-significant difference ($p=.0744$) between the Os and the I-Os. This means that the *ba*-Os in the corpus were mentioned significantly more often in their containing episodes than were either the Os or the I-Os, but the Os were not mentioned significantly more, or less, often than the I-Os.

Statistically speaking, the *ba*-O form significantly correlates with high-rate-of-mention. Thus, to the extent that rate-of-mention provides an indication of discourse saliency on the part of patient entities, the result from the foregoing tests has confirmed the expectation engendered by the general hypothesis that Mandarin speakers foreground salient patients with the *ba*-construction. Because the O and I-O forms are both found to correlate with low-rate-of-mention, one might simply conclude that both of these morphosyntactic forms can code non-salient patients. Of course, there would then be the problem of assigning grounding specifications to the O and I-O forms. Obviously, the statistical result of the mention criterion was not adequate, either, to fully validate the three-way distinction grounding mechanism. This problem should disappear, however, if the mention result is interpreted together with the sequentiality result.

5.3.3. Integrated Interpretation

When the statistical result generated by the textual mention criterion is considered in conjunction with that generated by the event sequentiality criterion, all three types of direct objects are instantly distinct and, as a result, the problems intrinsic in both sets of statistical analyses are resolved. Recall that although the statistical result from the sequentiality tests were not able to separate the *ba*-Os from Os, it did single out the I-Os. Based both on the fact that the I-Os were found, statistically speaking, in clauses coding out-of-sequence events and on the premise that out-of-sequence events in general are considered unimportant for the development of narratives, a tripartite correspondence emerged from the sequentiality analyses among the I-O form of direct objects, the non-salient status of patient entities and the proposed backgrounding discourse function. Also recall that the textual mention criterion successfully singled out the *ba*-Os, although it was not sensitive

enough to differentiate the Os from the I-Os. Based on the premise that speakers generally attend to more important entities more often than they do to less important ones, another tripartite correspondence took shape among the *ba*-O form of direct objects, the salient status of patient entities and the hypothesized foregrounding discourse function.

Strictly speaking, however, the two grounding relationships are not yet established, because so far they each have been articulated on the basis of only two statistically distinct levels of saliency. The question is where the O form fits in the grounding mechanism. It has aligned with the *ba*-O form on the event sequentiality account but with the I-O form on the rate-of-mention account. It would certainly not be well-founded to assign one of the three hypothesized grounding devices to two of the three posited levels of saliency no matter how the two levels are defined.

Nevertheless, the situation can be rectified if the two sets of statistical results are observed together and interpreted in a unified manner. When the results of the two tests are brought together, it becomes obvious that the *ba*-O form is uniquely correlated with patient entities which are involved in in-sequence events and which are frequently attended to in their narrative episodes. In contrast, the I-O form is uniquely associated with patient entities which are involved in out-of-sequence events and which are seldom referred to in their narrative episodes. The O form, finally, corresponds to patients which are involved in in-sequence events but which are not frequently attended to in their narrative episodes. Thus, all three coding relationships are substantiated in the same principled manner.

Patient entities which embody the positive values of both the criteria, in-sequence-of-event and high-rate-of-mention, can now be interpreted as the most salient. As expected, they are foregrounded morphosyntactically with the *ba*-construction. Less salient are patients which manifest the positive value of one criterion, in-sequence-of-event, and the negative value of the other, low-rate-of-mention. These patients are expected to be kept ground-neutral in the V#O construction. The least salient are patient entities with the negative values of both criteria, out-of-sequence-of-event and low-rate-of-

mention. They are backgrounded with the O-I construction, as predicted. The unified analysis of the two sets of statistical results is summed up in Table 5.4, where "In" and "Out" refer respectively to in-sequence and out-of-sequence vis-à-vis patient-involving events; and "High" and "Low" refer respectively to high and low rates with which the patient entities are mentioned in their containing episodes.

FORM	SEQUENTIALITY	RATE OF MENTION	FUNCTION
O	In	Low	Ground-neutral
ba-O	In	High	Foreground
I-O	Out	Low	Background

Table 5.4. Three grounding relationships derived from two analyses.

The empirical evidence adduced by the combined forces of the two analytical criteria is now sufficient to support the general hypothesis that Mandarin speakers use the three morphosyntactic forms of direct objects differentially to represent patient entities with different degrees of construed salience. To put it another way, given the three structural configurations which are equally possible for individual direct objects, Mandarin speakers quite regularly choose the *ba*-construction to foreground, or to highlight the individual identities of, direct object referents which they consider to be particular salient; they would choose the V#O construction to keep ground-neutral object referents which they consider to be moderately salient; and they would choose the O-I construction to background, or to obliterate the individual identities of, object referents which they consider insignificant for the discourse. Thus, to the extent that the general hypothesis is borne out by the statistical results, the proposed discourse grounding mechanism is empirically validated.

5.3.4. Residual Problems

One of the possible combinations of the two analytical criteria, i.e., out-of-sequence-of-event and high-rate-of-mention, did not figure in the analyses so far conducted. In fact, it did not really take shape in the general hypothesis formulated in 4.4.3 (p. 99). In articulating the hypothesis, although I did not

explicitly state it, I did assume that event sequentiality was the more fundamental of the two criteria and that textual mention was ancillary. The assumption was based on the understanding that sequentiality among events was a defining feature of narrative discourse. On the basis of this assumption, the relative saliency of patient entities should be assessed first and foremost in terms of the sequentiality values of their events. However, because event sequentiality was inherently binary, a complementary criterion was necessary so as to define more than two degrees of saliency and, presumably, to better approximate speakers' saliency imposition in narrative discourse production.

To use textual mention as an additional criterion was not an arbitrary decision. First of all, intuitively as well as from independent discourse studies on topicality (Givón, 1983), speakers attend to more salient discourse entities more frequently than less salient ones. Secondly, the more often an entity is attended to, the more individuated, or distinct, that entity should appear perceptually. While the first motivation for using the mention criterion came from the general understanding about the cognitive and purposive behaviors of the speaker, the second one came from the specific empirical model which, in a sense, concerned about the individual identities of patients. Coming back to the main argument, if the three morphosyntactic types of direct objects under study could fall into two groups by the sequentiality criterion (a case borne out statistically), then high- or low-rate of mention would further separate the two types objects thrown together by the sequentiality criterion (also a case statistically verified).

It was also assumed that the mention criterion need not be applied to the class of direct objects already singled out by the sequentiality criterion. It was not absolutely incidental, of course, that the direct objects in clauses coding out-of-sequence events turned out to be infrequently mentioned ones. By the general hypothesis, direct objects in clauses coding out-of-sequence events do not usually enjoy very high rate of mention. To begin with, since their containing clauses are treated as unimportant, it is then unlikely for the direct objects to get very much individual attention. Furthermore, the lack of individual attention usually translates into lack of specification with respect to their individual identities. Based on the premise that frequent mentions

to a referent would in effect reinforce the distinctiveness of that referent, one should not expect a lot of cases in which direct objects very frequently attended to are not even individually identified.

The fact that the combination of high-rate-of-mention and out-of-sequence-of-event did not surface from the statistical analyses may then be interpreted as indicative of the relative strength of the two analytical criteria. If the mention criterion were as potent as the sequentiality criterion, the high-rate-of-mention and out-of-sequence combination would have manifested. If it did manifest, the combination would presumably be competing with the low-rate-of-mention and in-sequence combination for the O type of objects. Of course, there is no such competition, which may mean that the sequentiality consideration weighs more heavily than the mention consideration. The fact that the high-rate-of-mention and out-of-sequence combination did not surface may also bear on the issue of relevance. If the mention criterion was only applicable to cases which could not be handled by the sequentiality criterion (Os vs. *ba*-Os), then what identified the I-O class could very well have been high-rate-of-mention and out-of-sequence combination instead of low rate-of-mention and out-of-sequence combination. This is not the case, of course, which may mean that rate-of-mention is irrelevant to patients that are non-salient by virtue of being involved in out-of-sequence events. Although the present study has not directly addressed the issues of potency and relevance, it has nevertheless provided some interesting leads for further study.

5.4. SUMMARY AND CONCLUSION

In this chapter I have sought to demonstrate the existence of a three-way grounding distinction in Mandarin narrative discourse. The empirical study has produced clear evidence that there are strong correlations between the discourse statuses of patient entities and the morphosyntactic forms of direct objects. Measured in terms of event sequentiality and textual mention, patients clearly differ in saliency. Particularly salient patients, those which are involved in in-sequence events and which are frequently referred to in the discourse, are generally coded in the *ba*-construction. Less salient patients,

those which occur in in-sequence events but which are infrequently mentioned in the discourse, are commonly coded in the V#O construction. And the least salient patients, those which occur in out-of-sequence events and which are infrequently mentioned, are usually coded in the object-incorporation construction. The distribution of the three object-containing constructions in discourse has thus validated the three-way distinction grounding mechanism in Mandarin.

Of course, the saliency status of a patient is never a matter of fact but a function of the speaker's imposition. The patients in the database could have all been represented in the O form, there was certainly no grammatical reason why that could not have been the case. Yet all three of the morphosyntactic forms were used and, more importantly, they were used in a non-random manner. This can only mean that the narrators regularly imposed specific degrees of saliency on the patient entities. However, given that they did, the patient entities in the database could still have all been coded in the O form, or the *ba*-O form, or the I-O form, for that matter, or randomly in all three forms. After all, saliency imposition pertains to a general human cognitive ability that is not specifically linguistic. The point is, there was no principled reason why the narrators coded the patient entities the way they did except for discourse/communicative purposes. To put it another way, no matter how salient a narrator had considered a patient to be, there was no need for him to linguistically indicate the saliency status of that patient except to manipulate the hearers' attention so that some intended communicative/discourse effects could be achieved. Thus, to the extent that the three-way distinction grounding mechanism is proven to exist in Mandarin discourse, the assumption is substantiated that Mandarin speakers regularly represent patient entities with different degrees of saliency to achieve their intended discourse effects. Discourse grounding can now be interpreted as the purpose for which the three object-bearing constructions coexist in the grammar of Mandarin.

Event sequentiality and discourse mention (when combined) have turned out to be quite effective means for identifying speaker-imposed saliency with respect to patient entities. While it is a well accepted

assumption that speakers have the cognitive ability to conceptualize the same situation in different ways, such an assumption, however, is extremely difficult to verify. First of all, there is no direct access to speakers' conceptualization, since it is impossible, at least for now, to monitor how much attention being directed to what entity at the time of speaking. Secondly, speakers' goals and intentions are not directly observable, either. Considering these difficulties, a posteriori means for approximating speakers' construals and intentions is so crucial to the success of the empirical research that developing an appropriate methodology is almost an empirical research in itself. By identifying the discourse effects of morphosyntactic forms of direct objects the two criteria use here together constitute a viable means for accessing speakers' construals with respect to the saliency status of event entities. It is essentially to test the reliability of this means that a somewhat different study has been designed. This study is reported in the next chapter.

CHAPTER SIX. VALIDITY OF THE GROUNDING MECHANISM

AN EXPERIMENT

6.1. INTRODUCTION

The quantitative study reported in the preceding chapter established the grounding relationships holding between the three morphosyntactic forms of Mandarin direct objects and three degrees of saliency which Mandarin speakers regularly differentiate among patient entities during the process of narrative discourse production. For that study, I adopted two analytic criteria, event-sequentiality and rate-of-mention, as the means for identifying the speaker-imposed saliency statuses of patients in narrative discourse. The use of these criteria did not need to make any reference to either the grammatical forms under study or to researchers' intuitions. Moreover, the two criteria are independently motivated. Thus, it commonly observed that temporally sequenced events, as opposed to non-sequenced events, carry narrative discourse forward. It is also generally observed that more salient entities are attended to more often. The event-sequentiality and textual-mention criteria were turned out to be sensitive to the most important and common factors conditioning speakers' cognitive and purposive behaviors in producing narrative discourse. Statistic analyses on the sampled narratives clearly revealed that each of the three morphosyntactic forms of direct objects were indeed uniquely correlated with one of the three combinations of the specific properties of event sequentiality and rate of mention, indicating that the two criteria were effective in separating different speaker-imposed saliency statuses on patient entities and, consequently, in adducing pertinent evidence for verifying the assumed grounding relationships between direct objects of different morphosyntactic forms and patient entities of different degrees of saliency.

An independent test of the reliability of the two criteria will be reported in this chapter. An experiment has been designed in which native speakers of Mandarin are invited to judge the appropriateness of the different

morphosyntactic forms of direct objects on the basis of the event-sequentiality and rate-of-mention information about the patients concerned. By systematically manipulating the specific properties of the two criteria, I hope to demonstrate that event-sequentiality and rate of mention indeed operate on the most important and common conditions influencing speakers' allocation of attention.

6.2. RESEARCH ISSUES

6.2.1. Technical Problems

Two problems arose from the previous empirical study that might have some bearing on the reliability of the analytical methodology. The first has to do with the fact that one possible combination of event-sequentiality and rate-of-mention, i.e., non-sequenced event and high-rate-of-mention, did not surface in the sampled narratives. While the absence of the combination in the text data can only mean that it is not common for a patient entity of an unimportant event to be attended to very often, cases of this kind are not inconceivable. The question is, given a large number of cases in which patient entities of out-of-sequence events are frequently mentioned, will there be a particular co-occurring morphosyntactic form of direct objects? The answer to the question should shed light not only on the relative potency of the two analytic criteria but also on the robustness of the two criteria together as a means to access speakers' saliency construals and communicative intentions.

The second problem has to do with the way the two criteria were used for extracting information from the data. Although event-sequentiality and rate-of-mention were expected to complement each other, they were applied independently in the previous study. Thus, the data were analyzed first using only the sequentiality-criterion and then using only the mention-criterion. The rationale for the procedure was to ascertain that each of the two criteria was uniquely sensitive to one condition on which speakers based their assignment of saliency status to patient entities. One consequence of such an analytical procedure was the lack of robustness in data classification. Not all the patient entities in a given class necessarily shared both of the classifying

features. For example, among the patient entities under the grouping of in-sequence-of-event and high-rate-of-mention, a few might have come from out-of-sequence events, while a few others might not have been mentioned very often in their individual episodes. Likewise, within the class identified for out-of-sequence of event and low rate-of-mention, a few patient entities might have occurred in sequenced events and a few others might have been mentioned more often than their group average. The question is, then, when a given sequentiality value and a given mention value are simultaneously imposed on patient entities, can the previously found grounding relationships sustain? The answer to this question should also reflect the robustness of the two analytical criteria as a means to approximate speakers' saliency imposition and communicative intentions in narrative discourse production.

Of course, these issues bear not only on whether event sequentiality and rate of discourse mention can together constitute a reliable means by which speakers' cognitive and purposive behaviors can be determined indirectly, but also on whether the previously identified grounding relationships between different morphosyntactic forms of Mandarin direct objects and different saliency degrees of patients can be sustained. Therefore, the answers to the questions formulated above may furnish fresh evidence to support the three-way grounding distinction in Mandarin narrative discourse and, ultimately, to validate the fundamental assumption that the grammar of a language serves the construal flexibility and communicative intentions of the speakers of that language.

6.2.2. Hypothesis

The two research issues will be addressed together in this experiment. Specifically, the two analytical criteria, event-sequentiality and rate-of-mention, are used as two controlled factors for the experiment. They are controlled in such a way that every patient, for which a morphosyntactic form is to be chosen from among three grammatically possible alternatives, is related to one and only one of the possible combinations of the two factors. Thus, for example, among patients grouped together by the in-sequence-of-event and low-rate-of-mention combination, none should be from an out-of-

sequence event or should be mentioned frequently within its episode. Similarly, among patients classified in terms of non-sequence of event and high-rate-of-mention, none is to be from a sequenced event or be mentioned infrequently within its episode. Because all the possible combinations of the two controlled factors are to be included in the experiment, there will be four groups of patient entities for which the subjects participating the experiment are to choose the most appropriate morphosyntactic representations.

On the basis of what was found from the text analysis, it is expected that event sequentiality and rate-of-mention will condition subjects' choices of morphosyntactic forms for patient entities. Specifically, the *b*a-O form should be selected for patient entities which are involved in sequenced events and which are frequently mentioned in their episodes; and the I-O form should be picked for patient entities which are involved in out-of-sequence events and which are not frequently mentioned in their episodes. In terms of the grounding mechanism, these two types of patient entities are expected to be judged as worthy of morphosyntactic foregrounding and backgrounding respectively. For patient entities occurring in sequenced events but are not frequently mentioned in their episodes, the O form will be the most common choice. Ground-neutral is expected to be preferred for this type of patient entities.

As for patient entities that are involved in out-of-sequence events and frequently mentioned in their episodes, no principled prediction can be made on the basis of what was found in the previous study. Four logical possibilities are entertained, though, which will provide evidence pertaining to the strength of the two conditioning factors. The choice of the I-O form will indicate that event sequentiality is the more fundamental of the two factors. That is, by not being involved in a sequenced event, a patient entity can be perceived to be non-salient enough to warrant backgrounding. On the other hand, the choice of the *b*a-O form will suggest that rate of discourse mention is the more basic of the two factors. By being frequently attended to in the discourse, a patient entity can be perceived to be salient enough to be worth foregrounding. Of course, the two factors can be equal in strength. If that is the case, the choice of the O form would mean that the two factors are

independent of each other, while no clear choice would suggest that they interact. The interaction has two manifestations. On the one hand, two factors counteract each other when their specific properties are combined in a certain way, as in the case of non-sequenced event joined with high-rate-of-mention. When their specific properties are combined in other ways, on the other hand, the two factors can reinforce each other. These four possibilities as well as the three specific predictions will to be tested in the experiment.

6.3. METHOD

6.3.1. Material

The stimuli developed for the experiment comprised 72 narrative episodes in Mandarin. They were initially selected from contemporary Chinese novels and subsequently edited to better suit the experimental design. Each stimulus episode contained a blank space indicating the absence of one clause. Three clauses were provided as candidates for each blank. These clauses featured the same direct object and represented the same semantic proposition but were of three different structures.

The episodes were selected in such a way that they each embodied one of the four combinations of the two controlled factors. Thus, the stimulus episodes fell into four groups. Episodes in the first group were classified by the combination of in-sequence-of-event and low-rate-of-mention. The absent clause in each of these episodes coded a sequenced event, and the direct object referent in the clause was not mentioned anywhere else in its episode. The combination of in-sequence of event and high rate of mention figured in the second group of episodes. The missing clause in each of these episodes coded a sequenced event, and the direct object referent in the clause was mentioned at least three times elsewhere in the episode. The third group embodied the combination of out-of-sequence event and low-rate-of-mention. The absent clause in each of these episodes represented a out-of-sequence event, and the object referent in the clause was not mentioned anywhere else in the episode. Finally, the fourth group had the combination of out-of-sequence of event and high rate of mention, such that the missing clause in each episode coded a out-of-sequence event, and the object referent

in the clause was mentioned at least three times elsewhere in the episode. While in- or out-of-sequence is a matter of objective observation, high and low rates of mention are here subjectively defined based on the pertinent information from the narrative analyses reported in the last chapter, where high rate was found to be an average of three mentions and low rate was less than one mention on average.

The decision about the number of stimulus episodes was arrived at as follows. First of all, given that there were three choices of object-containing constructions supplied to complete every episode, a full permutation of the three choices would produce six different orders in which the three choices could be presented. Secondly, given that there were four possible ways in which the specific properties of the two controlled factors were to be combined, there were four types of episodes to enter the experiment. For each of the six presentation orders to be assigned to each of the four types of episodes, therefore, the experiment must allow a minimum of 72 order-by-type arrangements. These arrangements are presented in Table 6.1 below.

ORDERING	In-Sequence Low-Rate M.	In-Sequence High-Rate M.	Out-of-Seq. Low-Rate M.	Out-of-Seq. High-Rate M.	TOT.
O>*ba*-O>I-O	3	3	3	3	12
O>I-O>*ba*-O	3	3	3	3	12
ba-O>O>I-O	3	3	3	3	12
ba-O>I-O>O	3	3	3	3	12
I-O>O>*ba*-O	3	3	3	3	12
I-O>*ba*-O>O	3	3	3	3	12
SUM	18	18	18	18	72

Table 6.1. Distribution of stimulus episodes.

The editing of the selected episodes served several practical purposes. First, as they were taken out of integrated stories, some of the episodes were not completely self-contained in that certain information necessary to interpret a given selected episode might be contained in other episodes of the same narrative. As it originally appeared, then, subjects would have to supply such information on their own. In order to prevent subjects from

bringing in different information which might confound their choices of the morphosyntactic forms, editing was required so that all the stimulus episodes could stand by themselves as complete mini-stories.

Secondly, as far as the stories were concerned, the stimulus episodes were intended to be mutually independent, so that no cross-episode reference was possible. This condition was necessary because there was no control over the amount of information that subjects might retain from related episodes, and different amounts of related information could have different effects on the subjects' judgments as to which of the three candidate clauses was the best to complete the episode currently under consideration. Thus, when two or more episodes were selected from the same narrative, slight changes were made, for example, to the names of the characters, so that no inter-episode correspondence could be easily drawn. As a further precaution, episodes from the same novels were presented on different pages.

Thirdly, as they were initially selected, the episodes varied in the number of clauses they each contained as well as in the numbers of printed lines they took up. For the stimulus episodes to take comparable amount of space in subjects' working memory, some episodes were slightly shortened and some others lengthened. As a result, the stimulus clause contained about fifteen clauses, each taking up four to six printed lines.

Finally, the selected episodes were edited to meet the exact feature descriptions imposed on the four types of episodes. There were cases among the original episodes in which the rate of mention was not high or low enough for a given property of event sequentiality. This was especially the case with those episodes designed to embody non-sequence of event and high rate of mention. Measures were taken to ensure that an object referent was mentioned at least three times elsewhere in its episode if high rate of mention was desired but was not mentioned anywhere else in its episode if low rate of mention was desired.

Although the previous study indicated that the position of mention within episodes was inconsequential to the choices of the morphosyntactic

forms, measures were nevertheless taken to neutralize any potential effect from mentions in the preceding context versus mentions in the following text. Thus, the episodes were selected in such a way that some had their missing clauses toward the beginning, some toward the middle and others toward the end. Consequently, one third of the object referents under study had relatively more "before mentions" than "after mentions," one third had more after-mentions than before-mentions and the rest of the object referents had relatively comparable number of before- and after-mentions in their episodes.

The clauses supplied as candidates for the blank in every episode were intended to be equally well-formed, so that subjects' choices would not be confounded by grammaticality concerns. (The cases in which the three object-containing constructions may not be equally grammatical were discussed in Chapter 5.) To ensure that grammatical acceptability is not a factor, two native speakers of Mandarin were consulted on each of the 72 sets of the candidate clauses. Pilot subjects were also invited to comment on the well-formedness of the possible choices. In case of doubt and controversy, either the clauses in question were replaced with others from the same episodes or the episodes were discarded altogether.

Finally, the stimulus episodes had been completely randomized before compiled into the choice-booklet. There was no apparent pattern, either in the combination of the specific properties of the two controlled factors or in the presentation of the provided blank-filling clauses, so that subjects would not be prompted to develop response expectancies and strategies.

6.3.2. Subjects

Thirty-six native speakers of Mandarin Chinese participated in the study. At the time of the experiment, they were all residing in Canada. Before they came to Canada, all had lived in China, where thirty-four of them finished their university and/or post-graduate education, and the other two were recent high school graduates who left China less than a year before the experiment. None of the subjects found the stimulus material beyond their literacy level or the stories foreign to their cultural background.

6.3.3. Experimental Procedure

The experiment was administered in a pencil-and-paper format. Each subject was presented with a booklet containing the 72 stimulus episodes. The instruction was presented to the subjects in written form. The subjects were informed at the outset that they were about to see 72 narrative episodes, among which there were no necessary connections (i.e., the episodes were mutually independent with respect to their story plots). It was also made clear to the subjects that there was a blank in every episode indicating the missing of a sentence and that below each episode were three sentences all of which represented the same event. The subjects were instructed to select one and only one sentence from the three as the most appropriate for the blank. Because the subjects were to make their appropriateness judgments on the basis of the contextual information, they were encouraged to read the episodes as many times as they felt necessary. They were also reminded that the three possible sentences were all different in the way they were constructed, and that they should be aware of the differences before they made their judgments.

The experiment was carried out in both small-group and individual sessions. In cases of group sessions, the subjects were instructed not to consult one another. There was no time limit on the experimental sitting, although all the subjects completed the task between one and two hours.

6.4. ANALYTICAL PROCEDURE

6.4.1. Full Scoring Procedure

The subjects' choices of the morphosyntactic forms for the 72 patient entities under study were recorded first using a full scoring procedure and then using a partial scoring procedure. By the full scoring procedure, all the choices of the subjects were recorded regardless of whether or not they were predicted. The data fell into twelve categories classified simultaneously on the sequentiality/mention criteria and on morphosyntactic realization. If event sequentiality and rate of mention, or more precisely, the different combinations of their specific values, had no effect on the subjects' choices,

then the three morphosyntactic forms should have an equal chance of being selected for each of the four types of patient entities. For example, for the 18 patient entities grouped on in-sequence of event and low rate of mention, the O, *ba*-O and I-O forms would each be chosen one third of the time. Given that there were 36 subjects making choices for the 18 patient entities in every group, the three morphosyntactic forms would each be chosen 216 times for each of the four groups of patient entities should the choices be random. Table 6.2. gives the distribution.

CHOICE	In-Sequence Low-Rate M.	In-Sequence High-Rate M.	Out-of-Seque. Low-Rate M.	Out-of-Seque. High-Rate M.	TOT.
O	216	216	216	216	864
ba-O	216	216	216	216	864
I-O	216	216	216	216	864
SUM	648	648	648	648	2592

Table 6.2. Form selection independent of the two factors.

The purpose for using the full scoring procedure was essentially to prepare the data for a test of independence, i.e., a test to determine whether the selection of morphosyntactic forms on the one hand and the information about event sequentiality and rate of mention on the other hand were independent of each other. Processed this way, the data would be ready for a further test to contrast the frequencies in which the three morphosyntactic forms were chosen both within and across groups. The contrastive analysis was motivated essentially by a pre-theoretical assumption that there would be a preferred morphosyntactic form for each of the first three groups of patients, but the choices would be rather random for patients grouped on the combination of non-sequence of event and high rate of mention.

6.4.2. Partial Scoring Procedure

By the partial scoring procedure, the subjects' choices were observed against the predicted choices. In other words, only the choices that would support or refute the research hypothesis were to be tallied. According to the hypothesis formulated earlier, the O form should be selected for patient entities which were involved in sequenced events and which were not

mentioned anywhere else in their episodes; the *ba*-O form should be chosen for patient entities which were involved in sequenced event and which were mentioned at least three times in their episodes; and the I-O form should be picked for patient entities which were involved in sequenced events and which were not mentioned anywhere else in their episodes. On the basis of the experimental design presented in Table 6.2, each morphosyntactic form would be chosen 648 times by the 36 subjects for each type of patient entities. Table 6.3 summarizes the theoretical distribution of the morphosyntactic choices.

CHOICE	In-Sequence Low-Rate M. O	In-Sequence High-Rate M. *ba*-O	Out-of-Sequence Low-Rate M. I-O	TOT.
Number	648	648	648	1944
Percentage	100%	100%	100%	100%

Table 6.3. Predicted distribution of the morphosyntactic choices.

Essentially, the partial scoring procedure was operating on a hit-or-miss basis. For example, given the 18 patient entities for which the O form was predicted, what was to be recorded by this procedure was how many of the 36 subjects actually chose the O form, regardless of what other forms they also chose. The purpose for using the partial scoring procedure was to prepare the data for a test of goodness of fit, a test to determine the degree to which the theoretical model would fit the data, the model which associated the three forms of Mandarin direct objects with the three combinations of sequentiality and mention properties. The extent to which the hypothesis was borne out in the subjects' actual choices should have been indicative of the reliability of event sequentiality and rate of mention, in certain combinations of their properties, as a measure of speaker-imposed saliency status of patient entities in transitive events. Below, the data are presented in terms of the two scoring procedures and the results of statistical tests on the data are discussed.

6.5. RESULTS AND DISCUSSION

6.5.1. Full Scoring and Tests of Independence

The morphosyntactic choices by the 36 subjects were tabulated on the basis of the full scoring procedure. Percentages of the O, *ba*-O and I-O choices were calculated for each of the four types of patient entities. Table 6.4 presents the distribution of the morphosyntactic choices by the subjects.

CHOICE	In-Sequence Low-Rate M.	In-Sequence High-Rate M.	Out-of-Seque. Low-Rate M.	Out-of-Seque. High-Rate M.	TOT.
O	542	75	91	217	925
	84%	12%	14%	33%	36%
ba-O	60	553	27	143	783
	9%	85%	4%	22%	30%
I-O	46	20	530	288	884
	7%	3%	82%	44%	34%
SUM	648	648	648	648	2592

Table 6.4. Distribution of the morphosyntactic choices by 36 subjects.

As Table 6.4 reveals, the 2592 choices did not spread evenly over the three forms under the four sequentiality-mention groupings. A test of independence was required to determine whether the subjects' choices of the morphosyntactic forms were random or conditioned by various combinations of event sequentiality and rate of mention.

With the morphosyntactic forms of direct objects as one variable and the sequentiality-mention combinations as the other, a chi-square test was performed on the data presented in Table 6.4. The result was a very high chi-square value, $X^2(6, N=2592) = 2277$, $p<.0001$. Clearly, the two variables were not independent of each other, but interacting in various ways. In other words, the highly significant chi-square value indicates conclusively that the subjects' choices of the morphosyntactic forms were not random but contingent upon event sequentiality and rate of mention in the various combinations of their specific properties. Furthermore, chi-square tests on the choices of the O, *ba*-O and I-O forms over the four groups of patient entities produced comparable results, $X^2(3, N=864) = 656.40$, $p<.0001$; $X^2(3,$

N=864) = 828.50, p<.0001; X^2(3, N=864) = 792.11, p<.0001 respectively, suggesting that the extent to which the subjects' choices were affected by the sequentiality and mention factors was consistent across the morphosyntactic forms.

However, consistency is not observable across the four groups in the extent to which the subjects' choices were affected. The chi-square values of the in-sequence and low-mention group, X^2(2, N=648) = 738.48, p<.0001, the in-sequence and high-mention group, X^2(2, N=648) = 795.67, p<.0001, and the out-of-sequence and low-mention group, X^2(2, N=648) = 694.18, p<.0001, were comparably high. Although also significant, the chi-square value of the out-of-sequence and high-mention group, X^2(2, N=648) = 48.68, p<.0001, was considerably lower. It is apparent from Table 6.4 that the difference in the magnitude of the chi-square values was due to the fact that there was an overwhelmingly favored form for each of the first three groups but not for the fourth group. Thus, the O form, chosen 84% of the time, was by far the most favored choice for the patient entities grouped on the combination of in-sequence of event and low-rate-of-mention. For those classified on the combination of in-sequence and high mention, the predominant choice was the *ba*-O form, which was selected 85% of the time. And the I-O form, chosen 82% of the time, was absolutely the prevalent choice for the patient entities grouped on the out-of-sequence and low-mention combination. In contrast, the subjects did not show a distinct preference for any particular morphosyntactic form to represent patients in the out-of-sequence and high-rate-of-mention group.

A few interesting observations can be made on the distribution of the three morphosyntactic choices for the patient entities grouped on the out-of-sequence and high mention combination. First of all, this specific combination of the two controlled factors did not seem to favor or disfavor the O form, which was chosen almost exactly one third of the time for this group of patient entities. The fact that the choice of the O form was not affected by this sequentiality-mention combination implies that the two controlled factors are not equal in strength, for otherwise non-sequentiality and high mention would have counterbalanced each other and produced the

same effect as did the non-sequentiality and low mention combination, which did opt for the O form. To the extent the two controlled factors differ from each other in potency, they influence each other in different ways, as will become evident in the following analysis.

Secondly, because the choice of the O form was at the average, the significance of the chi-square value could only have resulted from the contrast between the choice of the *ba*-O form and the I-O form. Given that 44% of the choices for this group of patient entities were I-Os and only 22% were *ba*-Os, the chi-square value can only mean that the I-O form was selected significantly more often and the I-O form was selected significantly less often than what would be the case if it were a random effect. This analysis leads to a direct contrast between the effect of juxtaposing in-sequence and high mention on the one hand and the effect of juxtaposing out-of-sequence and high mention on the other. Since the *ba*-O form was judged to be the least appropriate for patient entities grouped on the non-sequence and high mention combination but the most appropriate for those grouped on the combination of in-sequence and high mention, it is apparently the case that the positive value of sequentiality enhances high rate of mention, but the negative value of sequentiality counteracts the effect of high rate of mention.

Thirdly, a question arises from the analysis that the negative value of event sequentiality counteracts the effect of high rate of mention: To what degree does non-sequentiality attenuate the effect of high mention? This question can be addressed through a comparative analysis of the two groups of patient entities which shared the characterization of non-sequence of event but which differed in rate of mention. Note that the two groups both favored the I-O form. If the effect of high-mention was completely overridden by non-sequentiality, then the number of I-Os selected for one group would not differ significantly from the number of I-Os selected for the other group. A t-test was thus motivated to compare the two groups in terms of the mean choices of the I-O form. The difference between the two groups was found to be significant, $t(1) = 14.99$, $p < 0.05$. The significant t-value is sufficient to warrant an interpretation that non-sequentiality of event does not level out

the difference between high and low frequencies of mention but only reduces the effect of high rate of mention.

To recapitulate, the morphosyntactic choices for patient entities were found to be contingent to a great extent upon the event sequentiality and rate of discourse mention information about those patient entities. It was further confirmed that the sequentiality and mention factors interacted in various ways and hence affected the morphosyntactic coding of patient entities in different fashions and to different degrees. Among the four sequentiality-mention combinations, three appeared to be very strongly associated with the three forms of Mandarin direct objects. These associations lent support to the hypothesis formulated in 6.2.2. Nevertheless, how much the hypothesis is borne out in the data remains to be seen.

6.5.2. Partial Scoring and Tests of Goodness of Fit

The database constructed for tests of goodness of fit included only those choices by the subjects which pertained to the hypothesis entertained here. In other words, for every patient entity, the subjects' choices were scored as hits or misses in terms of the hypothesis, and the database contained only the number of hits. More specifically, because the O form was hypothesized to be chosen for those patient entities grouped on in-sequence of event and low rate of mention, only the O choices were tabulated with respect to this group of patient entities. Likewise, only the number of *ba*-O choices was counted vis-à-vis the patient entities grouped on in-sequence of event and low rate of mention, since the *ba*-O form was hypothesized for this group of patient entities. Regarding the patient entities grouped on out-of-sequence of event and low rate of mention, only the number of I-O choices was tallied, since the I-O form was hypothesized for this group of patient entities. Table 6.5 is a summary of the hit scores for the three groups of patient entities covered by the hypothesis.

	In-Sequence Low-Rate M. O	In-Sequence High-Rate M. *ba*-O	Out-of-Sequence Low-Rate M. I-O	TOT.
Predicted	648	648	648	1944
Observed	542	553	530	1625
Percentage	83.64	85.34	81.79	83.59

Table 6.5. Predicted and observed choices of morphosyntactic forms.

Obviously, there is no perfect match between the number of hit choices (the observed frequencies), and the number of predicted choices (the theoretical frequencies engendered by the hypothesis). While the issue of predictability will be discussed later, what is of immediate concern is whether the observed frequencies and the theoretical frequencies differ significantly. The hypothesis stands or falls depending on the magnitudes of the differences between the two types of frequencies and the theoretical model to determine speaker-imposed saliency status of patient entities will be sustained or refuted accordingly.

Chi-square tests were performed to measure the discrepancies between the three sets of observed frequencies and their corresponding theoretical frequencies. The chi-square values of the O, *ba*-O, and I-O choices were respectively $X^2(17, N = 648) = 23.42, p>.05$; $X^2(17, N = 648) = 24.23, p>.05$; and $X^2(2, N = 648) = 31.70, p>.01$. Thus, at the one percent level of significance, there are no differences between the numbers of choices the subjects were predicted to make and the numbers of choices the subjects actually made in all three cases. At the five percent level of significance, however, the chi square value of the I-O choices exceeded the critical value of 27.59, indicating that the fit in the I-O case is not as good as it is in the O and *ba*-O cases.

On the whole, the three combinations of the specific properties of the event sequentiality and rate of discourse mention turned out to be quite good measures of the saliency status of patient entities. Subjects' choice of the O form was obviously conditioned by in-sequence of event and low rate of mention combination. Similarly, their choice of the *ba*-O form was clearly prompted by in-sequence of event and high rate of mention. Finally, their

choice of the I-O form was quite certainly motivated by the combination of out-of-sequence of event and low rate of mention, although the hit rate of I-Os was slightly lower than desired.

6.5.3. General Discussion

This experiment has produced strong evidence once again in support of the claim that the correlations between the three saliency statuses of patient entities and the three morphosyntactic forms of direct objects are not chance co-occurrences but are the product of quite conventionalized grounding specifications. Event sequentiality and discourse mention have been proven to be effective in distinguishing three levels of saliency on the part of patient entities and are therefore instrumental in validating the three-way distinction grounding mechanism. More important to this experiment is the fact that by manipulating event sequentiality and discourse mention, i.e. by juxtaposing the specific values of the two factors in different ways, the subjects' formal judgment can be effectively manipulated. This should be a strong proof that the event sequentiality and rate of discourse mention are reliable means to approximate Mandarin speakers' saliency construal and communicative intentions in narrative discourse.

It should be pointed out, however, that the grounding relationships were not completely borne out by the experimental data. That is, a given morphosyntactic form of direct object was not uniquely chosen every time a patient entity met the appropriate condition. The discrepancy between what was actually observed and what was theoretically expected can be attributed to both the operational mechanics of and the theoretical assumptions behind the experiment. The operational sources of the discrepancy can be anything from the stimulus material to the manipulation of the independent factors. Thus, for instance, the subjects' judgments were noticeably inconsistent with respect to several episodes, which indicates that those stimulus episodes were poorly constructed. While such technicalities could have been improved, little could have been done about the theoretical sources of the discrepancy. A given combination of sequentiality and mention values was not expected to govern a speaker's formal choice absolutely, because it simply could not be sensitive to everything that could have gone into the speaker's

conceptualization of salience at any given moment in discourse production. Moreover, discourse grounding is not strictly related to morphosyntactic coding, in the same way as, for example, the English verbal suffix *-s* codes third person singular verb agreement. In fact, the very assumption that motivated the discourse grounding hypothesis in the first place is the fact that speakers are able to conceptualize the same situation in alternate ways. From this point of view, a certain amount of variation in the subjects' judgment should be considered as circumstantial evidence of the theoretical assumption. Thus, at least some of the discrepancy between the observed and the "expected" formal choices is simply a natural consequence of alternative construals on the part of speakers.

6.6. SUMMARY AND CONCLUSION

The experiment reported in this chapter is a further test of the validity of the assumption that Mandarin speakers use the three object-containing constructions differentially to represent patient entities with three different degrees of subjectively imposed saliency. By approximating speaker-imposed saliency in terms of event sequentiality and rate of mention, this experiment has confirmed that salient patient entities are indeed commonly foregrounded with the *ba*-construction, non-salient ones are generally backgrounded by object-incorporation, and those whose individual identities are not particularly salient or non-salient are kept ground-neutral in the V#O structure. Thus, the three grounding relationships emerged in the previous study are sustained in the present.

Special attention has been paid to the reliability of the analytical means, event sequentiality and rate of mention. In fact, it is reliability concerns that prompted the experiment. Event-sequentiality and rate-of-mention were adopted as analytical means for the study reported on in Chapter Five. But due to the nature of the study, they were used as mutually independent criteria. For this experiment, then, special interest has been given to the interaction of the criteria. The technique involved the juxtaposition of each value of one criterion with each value of another. In this way, it has been found that the two criteria interact with each other to produce different effects

on the saliency status of patient entities. On the one hand, sequentiality and high-rate-of-mention complement each other to increase the saliency of patient entities, whereas non-sequentiality and low-rate complement each other to down-grade the saliency status of patient entities. On the other hand, low-rate-of-mention and sequentiality counterbalance each other such that the saliency status of patient entities is left unchanged, whereas high-rate-of-mention and non-sequentiality overwhelm each other, resulting in a quite incoherent reading to the saliency status of patient entities. The first three sequentiality-mention combinations, which have consistently motivated the subjects' choices of the three morphosyntactic forms of direct objects, are therefore reliable measures of saliency.

Not only are the three sequentiality-mention combinations reliable measures of saliency, they are also natural measures. It is worth noting that these measures are not intrinsically discrete. Thus, two of the measures share the same value of event sequentiality, and two share the same value of rate-of-mention. The significance of such inclusiveness among the saliency measures is that it reflects the nature of speaker-imposed saliency. Intuitively, the distinction between levels of saliency as conceptualized by the speaker are not cut and dry. The saliency measures devised here can capture the speaker's conceptual scheme in a natural and intuitively satisfying manner.

The three-way distinction grounding mechanism in Mandarin narrative discourse is once again substantiated by event sequentiality and rate-of-mention criteria. Of course, the two analytical criteria are only indirect means to approximate Mandarin speakers' saliency construals. Given this fact and the fact that discourse is a multi-factored enterprise containing cross-cutting dimensions of various kinds, the form-construal grounding relationships cannot, and should not, be interpreted in an absolute sense. In the final analysis, therefore, the grounding mechanism stands not on absolute predictability but, rather, on probabilistic mappings between the three morphosyntactic forms of Mandarin direct objects and patients of the three levels of saliency, which can be independently measured in Mandarin narrative discourse.

CHAPTER SEVEN. IMPLICATIONS AND PROSPECTUS

RELATED ISSUES AND RELATED STUDIES

7.1. INTRODUCTION

In the last two chapters, I reported on two empirical tests of the validity of the three-way distinction grounding mechanism which was developed to account for the morphosyntactic contrast among Mandarin direct objects as reflected in three object-bearing constructions The empirical evidence clearly indicates that the grounding mechanism indeed provides a principled and revealing explanation for the non-random distribution of the object-bearing constructions in Mandarin discourse. What I am obliged to address now is the validity of the grounding mechanism in a larger context. While "it is both necessary and legitimate for linguists to focus selectively on certain problems" extracted "from a broader fabric of interrelated concerns," there is nonetheless a tendency "for the investigator to lose sight of the actual complexity of his subject matter" (Langacker, 1987, p. 27). It is thus the investigator's responsibility to assess whether the solution provided for the selected problem is natural and in accordance with the existing knowledge about the subject matter. This will be the objective of this final chapter.

Specifically, I shall find out whether discourse grounding ---what I have determined to be the purpose for which Mandarin permits the morpho-syntactic contrasts among direct objects to survive--- can be extended to account for other phenomena pertaining to the morphosyntax of Mandarin direct objects. For this purpose, I shall in 7.2 make some observations on two grammatical structures that also involve direct objects in Mandarin. After examining their structural properties, I shall present an argument that these structures are generally occasioned for the effect of increasing or decreasing the saliency of patient entities and that they subsume under the discourse grounding mechanism. Then, in 7.3, I try to place the present research within the context of other discourse studies on, and beyond, the morphosyntax of Mandarin direct objects. The purpose is to evaluate the grounding

mechanism, as well as the assumption underlying it, to see whether it can be related naturally to what is already known about the grammar of Mandarin and grammatical organizations of languages in general. Finally, I conclude that the empirical studies carried out here, to the extend that the discourse grounding mechanism can explain the differential use of the three object-containing constructions in Mandarin discourse, has served to link some aspects of grammar with speakers' cognitive abilities and communicative needs. The chapter ends with some dimensions in which further inquiry may be formulated.

7.2. DISCOURSE GROUNDING AND RELATED PHENOMENA

In this section I present two clause structures that also involve direct objects in Mandarin. One of these structures contains two direct objects that are semantically related. The other contains two verbs that are morphemic copies of each other. The conditions under which these structures are formed provide an independent check on the validity of the grounding mechanism developed specifically to account for the contrasts among the V#O, *ba*- and O-I constructions. The two structures to be examined also invoke the three constructions which appear to have the same effects on direct objects as what has been captured by the grounding mechanism. It will become evident the two structures are special cases of object-grounding.

7.2.1. The "Whole-Part" Phenomenon

The clause structure we are observing now contains two direct objects. One of them precedes the verb and is marked by the morpheme *ba*-. The other follows the verb. This structure is illustrated in (1a). The post-verbal object is often referred to as the "retained-object" (Lü, 1955), which implies that the two objects were originally one object complex located in the post-verbal position. For some reason, one moved out of the complex while the other remained. Whatever that reason may be, the point to note now is that the two objects are semantically and conceptually related: one is a "whole" while the other is a "part" of that whole. This relationship is indicated in (1b). For ease of discussion, I shall refer to this clause structure as the "whole-part" (W-P) construction and the two objects as the "whole-object" and the

"part-object" respectively. The whole-object and the part-object are indeed direct objects. This is evidenced by the fact that they both sustain passivization, as can be seen in (1c) and (d).

(1) a. *fuqin ba- **qiche** huan-le luntai*
father BA- car change-PFV tire
'What Father did to the car was to change its tire(s).'

b. *fuqin huan-le **qiche**-de luntai*
father change-PFV car-GEN tire
'Father changed the tire(s) of the car.'

c. ***qiche** bei fuqin huan-le luntai*
car PASS father change-PFV tire
'The car was changed vis-à-vis the tire(s) by Father.'

d. *(**qiche** ne,) luntai bei fuqin huan-le*
(car PAUS,) tire PASS father change-PFV
'(About the car,) its tire(s) was (were) changed by Father.'

The most important property of the W-P construction is the intrinsic relationship between the whole-object and the part-object. Thus, while the whole-part relationship can be compared to that of possessor-possessed, not every possessor-possessed sequence can be represented in the W-P construction. (2) provides a case in point. Although *fuqin* 'father' is the possessor of *qiche* 'car', they are not intrinsically related. That is, 'car" is not a natural part of 'father'. The W-P construction, (2a), is therefore impossible.

(2) a.* *women ba- **fuqin** xi-le qiche*
we BA- father wash-PFV car

b. *women xi-le **fuqin**-de qiche*
we wash-PFV father-GEN car
'We washed Father's car.'

The natural coalescence between the whole-object and the part-object is crucial for the W-P construction because it underlies the conception that the whole is necessarily affected as a result of its part being affected. It is to such affectedness that the whole-object owes its conceptual status as an individual entity and its grammatical status as a full direct object. The point that the whole-object is affected when its part is is driven home by Fox (1981) in her cross-linguistic studies of body-part syntax. If a part of a body is affected, the

body is inevitably affected. Based on the fact that a body-part and the body are physically contiguous, Fox concludes that it is the physical contiguity between the body and the body-part that is responsible for the conception of affectedness of the body when only a body-part is directly affected. While physical contiguity represents the optimal condition for conceptualizing the affectedness of the whole, such conceptualization can certainly go beyond the obvious. (3) and (4) below illustrate the point.

(3) a. *tamen ba- **fuqin** mian-le zhi*
they BA- father terminate-PFV position
'what they did to Father was to terminate his employment.'

b. *tamen mian-le **fuqin**-de zhi*
they terminate-PFV father-GEN position
'They terminated Father's employment.'

(4) a. *tamen ba-**haizi** gai-le ming*
they BA-child change-PFV name
'What they did to the child was to change her name.'

b. *tamen gai-le **haizi**-de ming*
they change-PFV child-GEN name
'They changed the child's name.'

As far as the speaker/conceptualizer is concerned, 'father' in (3) is definitely affected as a result of his job being taken way. This is not inconceivable based on our common socioeconomic sense. In (4), 'child' is affected having had her name changed. Clearly physical contiguity is not a factor in these two cases. Whatever conditions this kind of affectedness conception, suffices it to say that such affectedness conception sanctions the W-P construction.

Foregrounding the whole-object. For the purpose of indicating the semantic/conceptual relationship between the whole-object and the part-object in the W-P construction, I have supplied a V#O sentence for each set of examples above (see the b-sentences in [1-4]). The point to be made on the basis of the V#O sentences is that while the conception of affectedness with respect to the whole-objects sanctions the W-P construction, it does not necessitate it. The affectedness of the whole-objects is not inconceivable even if the whole-objects are represented in the V#O construction where they

function simply as possessors modifier of the part-objects. The real difference between the a-sentences and the b-sentences in (1-4) is that in the former the affectedness of the whole-objects is toned up as a result of the whole-objects being individuated and highlighted. When a whole-object is individuated and highlighted, it is possible to elaborate on the extent of its affectedness, as can be seen in (5a). Such elaboration is impossible in (5b) where the whole is not formally separated from the part and is hence not individuated. Thus, for (5b) to be acceptable, the extent expression must not be included.

(5) a. *wo xian ba-**pingguo** tongtong qu-le* *pi*
I first BA-apple all take:off-PFV skin
'What I first did to all of the apples was to take off their skin.'

b. *wo xian (*tongtong) qu-le **pingguo**-de pi*
I fist (all) take:off apple-GEN skin
'I first took the skin off the apples.'

Clearly, the W-P construction falls in completely with the analysis presented in Chapter Three for the *ba*-construction. It can be concluded then that the W-P construction is a special case of the foregrounding. It is special because it foregrounds a particular type of direct objects: the whole-objects. An implication of this statement is that the W-P construction cannot foreground part-objects. This is indeed the case. As can be seen in (6b), the part-object cannot exchange places with whole-object in the W-P construction. If the part-object must be foregrounded, either it has to be foregrounded together with the whole-object or the whole-object has to be omitted, as in (6c). In either case, though, the clause is not a W-P construction. Another way to foreground the part-object is by topicalizing the whole-object, as in (6d).

(6) a. *wo ba-**lunwen** gai-le* *timu*
I BA-thesis change-PFV title
'What I did to the thesis was to change its title.'

b.* *wo ba-timu gai-le **lunwen***
I BA-title change-PFV thesis

c. *wo ba- (**lunwen**-de) timu gai-le*
I BA-(thesis -GEN) title change-PFV
'I changed the title (of the thesis).'

d. ***lunwen*** *ne,* *wo* *ba-timu* *gai-le*
thesis PAUS, I BA-title change-PFV
'As for the thesis, what I did to the title was to change it.'

Backgrounding the part-object. One may infer from (6) that the whole-object is conceptually more salient than the part-object. Such inference is supported by the fact that the W-P construction optionally backgrounds the part-object but never the whole-object. In other words, the part-object can be incorporated into the verb, but the whole-object must stay independent. In (7a) the part-object 'title' is incorporated. The whole-object 'thesis' in (7b), on the other hand, resists incorporation. (7c) is impossible because for 'title' to be incorporated, the possessor specifier must go. Nevertheless, to incorporate the part-object does not necessitate the W-P construction. In (7d), 'thesis' can go to the topic position while 'title' is incorporated.

(7) a. *wo* *ba-**lunwen*** *gai-timu-le*
I BA-thesis change-title-PFV
'What I did to the thesis was changing its title.'

b.* *wo* *ba-timu* *gai-**lunwen**-le*
I BA-title change-thesis-PFV

c. *wo* *gai-* *(*__lunwen__-de)* *-timu-le*
I change-(thesis -GEN)-title-PFV
'I did title-changing.'

d. *(**lunwen** ne,)* *wo* *gai-timu-le*
(thesis, PAUS) I change-title-PFV
'As for the thesis, I did title-changing.'

Foregrounding while backgrounding. Having made the point that the W-P construction is not obligatory for foregrounding the whole-object or backgrounding the part-object, since there are other means to the ends, I now try to argue that the W-P construction exists in the grammar for its unique function to foreground the whole-object while backgrounding the part-object. It is used primarily for this function, too. In other words, when the W-P construction is used, it is often not used just for foregrounding the whole-object or just for backgrounding the part-object, but for both purposes. Thus Lü (1955) remarks, a retained-object (part-object here) is often combined with

the preceding verb to make a colloquial compound verb. Sentences like (8) and (9) exemplify the common use of the W-P construction.

(8) *tamen toutou-de ba-**wo** lu-yin-le*
they secret-ADV BA-me record-voice-PFV
'What they secretly did to me was taping my voice.'

(9) *yisheng bu-de-bu ba - **ta** jie-zhi-le*
doctor NEG-ADV-NEG BA-3sg amputate-limb
'What the doctors had to do to him was amputating his arm/leg.'

That the W-P construction is used to foreground the whole-object and background the part-object at the same time is intuitively natural. A part is conceptually undifferentiated from its whole. Thus, when the whole is given the focus of attention, what little individual identity left in the part becomes un-noteworthy. On the other hand, when the individual identity of the part is suppressed, the whole receives more attention than it otherwise would.

The W-P construction can be characterized as a grounding device by which Mandarin speakers can foreground a certain potion of an object complex and background the rest at the same time. More important than the fact that it accords with the grounding mechanism is the fact that it provides some insights into what belongs to the speaker's cognitive ability pertaining to attention control and his psychological propensity pertaining to focus selection. Given a patient entity, a speaker is capable of allocating different amounts of attention to its individual facets, emphasizing some at the expense of others. The W-P construction reflects the speakers' ability and tendency to allocate more attention to the individual identity of the whole and less attention to the part of the whole. Considering that the whole (as a possessor) often refers to a human and animate entity, the W-P construction also nicely reflects speaker empathy in selecting perceptual focus.

7.2.2. The "Verb-copying" Phenomenon

The phenomenon I am presenting now is "Verb-copying". It refers to a clause structure that contains two "identical" verbs, one complemented by a direct object and the other by some adverbial element. Several structural descriptions have been offered for this construction (cf. Huang, 1984; Tai,

1985). (10) is a schematization of the construction from Li and Thompson (1981, p. 443, the subscripts are supplied to indicate that one verb is a "copy" of the other.

(10) [(Subject) $Verb_i$ Direct object $Verb_i$ Adverbial element]

Some information must be supplied to flesh out the schema. First, the adverbial element is usually one of the four types, according to Li and Thompson's observation (1981). It can be a a directional phrase, as in (11); a quantity adverbial phrase, as in (12); locative phrase, as in (13); or a complex stative construction, (glossed with CSC) as in (14). For ease of observation, the verbs and their copies are indicated in boldface, while the adverbial elements are underlined.

(11) *wo* ***liu****-ma* *jingchang* ***liu*** *dao hebian*
I ride-horse often ride to riverside
'Riding-horse, I often ride to the riverside.'

(12) *wo* ***pai****-shou* ***pai****-le* *si ci*
I clap-hand clap-PFV four time
'Clapping-hands, I clapped four times.'

(13) *ta* ***ting****-che* *zongshi* ***ting*** *zai fang qian*
3sg park-car always park at house front
'Parking-car, he always parks in front of the house.'

(14) *tamen* ***jiaoyu****-haizi* ***jiaoyu*** *de hao*
they educate-child educate CSC well
'Educating-children, they educate well.'

The adverbial element is generally believed to be responsible for the verb-copying phenomenon (cf. Huang, 1984; Li & Thompson, 1981). It has been argued that there is only one complement position after the verb, thus when the position is taken by an adverbial element, the direct object is forced out of that position. Consequently the verb has to be copied to host the displaced direct object. While these adverbial elements do seem to take priority for the post-verbal complement position, they do not necessarily invoke the verb-copying construction. Three out of four of the above exemplified direct

objects can be relocated easily within the same clause without having to copy the verbs.

(12)' *wo* ***pai-le*** *si ci shou*
I clap-PFV four time hand
I clapped my hands four times'

(13)' *ta zongshi ba-che* ***ting*** *zai fang qian*
3sg always BA-car park at house front
'He always parks his car in front of the house.'
(or What he always do to his car is to park it in front of the house.')

(14)' *haizi tamen* ***jiaoyu*** de hao
child they educate CSC well
'As for their children, they educate them well.'

Another feature of the verb-copying construction is that the "copy" that is hosting the direct object is not a full-blown verb. It cannot take aspect marker or be negated as can canonical verbs. (15) illustrates this feature. Thus, what is complemented by the direct object is not a true copy of what is complemented by the adverbial element.

(15) a. *wo (*mei)* ***gai-wenzhang*** *(mei)* ***gai-le*** *wu bian*
I (NEG) revise-paper (NEG) revise-PFV five time
'Revising-paper, I revised five times.

This brings us to the most important feature of the construction: the relationship between the direct object and its hosting verb. Li and Thompson (1981) have observed that the verb and the direct object constitute a single unit, and a "frozen" one at that, "in the sense that it is not subject to any grammatical modification. Thus the direct object is typically non-referential; the verb does not take any aspect marker; and the entire unit must be outside of the scope of negation and certain adverbial elements" (p. 450). I will take their "non-referential" to mean formally non-specified and agree in principle with their characterization of the verb-object relationship. I must point out, however, that there is nothing "frozen" about the verb-object sequence. This should be evident from the fact that 'hand' in (12)', 'car' in (13)' and 'child' in (14)' can all stand on their own. Nevertheless, within the verb-copying

construction, the verbal form and object form do constitute a unit. The issue here is not whether there is such unity, but the nature of the unity.

To address the issue is to find out what contributions the verb and the direct object each make to the unity. let me begin with the direct object. As indicated in the English translation of the above cited Mandarin sentences, the object is there to substantiate the verb, narrowing down the semantic scope of the verb. In other words, the object "refines the meaning of the verb in question, limiting its application to the set of objects named by the noun" (Harrison 1976, cited in Mithun, 1984, p. 850). Thus, for example, sentence (14) means what they educate well is not people in general, but their own children specifically. Similarly, sentence (15) means what I revised five times was not a book or anything else but a certain paper. It seems, then, that the object contributes to the verb-object unity semantically.

The verb makes a different kind of contribution to the verb-object unity. It may first seem that the verb is "reduplicated" specifically to host the "displaced" object. However, the fact that the object can be accommodated elsewhere in the sentence indicates that the position the verb creates for the object is a unique one. In this position, the object is morphosyntactically attenuated. In other words, the "copied" verb incorporates the object. I have made observations on this type of incorporation in Chapter 3. For the present discussion, it is enough to note that the verb contributes to the verb-object unity morphosyntactically.

Clearly, "verb-copying" is a case of object-incorporation. The question now is the purpose of the incorporation. Observing (12)', (13)' and (14)' again, one realizes that the verb can get the same amount of semantic qualification without having to be reduplicated. Obviously, the incorporation is not for the sake of the verb. The purpose of this type of incorporation must be related to the fact that the adverbial elements do constrain the structural position of the direct objects. Thus, the direct object in (13)' is limited to two positions. It can occur either preverbally and marked by *ba*- or sentence-initially as the topic. That in (14)' is event more restricted in that it can only occur sentence-initially as the topic. Although these are possible positions for

the direct objects, they might not be desirable ones. If the speaker does not want to give such prominent positions to the direct objects, or, more to the point, if the speaker finds it desirable to suppress the individual identities of the objects, the verb-copying construction must be used.

Adverbials, such as *zongshi* 'always', *si ci* 'four times', etc., not only constrain the structural positions of direct objects, they also independently motivate object-incorporation. These adverbials typically code general information, information about the manner, location, direction or duration in which the agents conduct certain types of activities. What happened to the patients, on the other hand, is of no concern. Since the object is there only to specify the activity denoted by the verb, it is warranted to keep their individual identities in low profile, so that the activity can be perceived as a whole. Verb-copying is thus a special case of object-backgrounding. It is special in the sense that object-incorporation in the verb-copying construction is motivated sentence internally by some adverbials that are typically associated with general activities as opposed to specific events. Nevertheless, such sentence internal motivations can be overridden by discourse considerations. That is, even in the presence of those adverbials, objects can still be represented as independent forms. In the final analysis, it is the speaker that decides if and when verb-copying is necessary for the purpose of backgrounding direct objects.

By way of recapitulation, I have presented in this section two grammatical phenomena which involve the representation of patient entities in Mandarin. On the basis of their structural properties, I have argued that these phenomena are special cases of object-grounding. Thus, the "whole-part" construction is a device by which one potion of an object can be foregrounded while the rest backgrounded. The "verb-copying" construction is a case of object-incorporation by which patient entities of typically non-specific events are backgrounded. I have demonstrated that neither of these grammatical processes are obligatory. It is only for the effect of increasing or decreasing the discourse saliency of direct objects are that these constructions are occasioned. The two phenomena are hence best elucidated in terms of the grounding mechanism.

7.3. THE GROUNDING MECHANISM AND RELATED STUDIES

This dissertation has been intended as a search for the fundamental reason why three propositionally equivalent object-containing constructions are allowed to coexist in the grammar of Mandarin Chinese. Taking the position that language is not autonomous, but an integral part of human cognition, and grammar is not arbitrary, but a set of symbols structured according to cultural conventions for expressive purposes, I have carried out two empirical studies to learn the cognitive foundation and communicative functions of the three grammatical constructions. Some clear form-construal correlations have emerged from the distribution of the constructions in discourse. Characterizing the correlations in terms of a discourse grounding mechanism, I have attributed the morphosyntactic differences to speakers' ability to conceptualized perceived information in different ways and their purposive behavior in language use. While the grounding hypothesis has been verified by the empirical evidence and the grounding mechanism has been shown to be applicable to some related grammatical phenomena in Mandarin, the present study needs to find its place within the discourse studies of and beyond Mandarin direct objects. In what follows, I briefly evaluate the findings of the present research in relation to those from other discourse studies.

7.3.1. Discourse Studies on Mandarin

I first try to place what is found through my research within the context of current discourse studies on Mandarin direct objects, and to bring out what is new in its implications. Mandarin direct objects have been studied primarily, if not exclusively, in terms of their structural positions. Preverbal direct objects, as opposed to post-verbal ones, have been analyzed as definite and referential (Li & Thompson, 1981), contrastive/emphatic (Sun & Givón, 1985), and topical (Zubin & Li, 1986; Tsao, 1987). The fact that each of these hypotheses shows some measure of success in explaining the structural facts about Mandarin direct objects may mean that each is informed by a specific aspect of a general phenomenon, which I believe to be discourse saliency.

In the present study, I observed the discourse effects of both the structural position and the lexico-syntactic behaviors of direct objects. As a result, the discourse grounding mechanism which emerged from this more finely-tuned study provides a unified and principled characterization of the structural-categorial facts about Mandarin direct objects with their cognitive-functional correlates. Furthermore, with the *ba*-construction analyzed as the foregrounding device for particularly salient patient entities in discourse, an expectation is engendered by the grounding mechanism that many preverbal objects are emphatic, some may even be contrastive. Likewise, with object-incorporation analyzed as the backgrounding device for particularly non-salient patient entities, it is predicted by the grounding mechanism that many post-verbal direct objects are indefinite and non-referential. Thus, the discourse grounding mechanism unifies the central features of both the definiteness and the contrastiveness hypotheses.

7.3.2. Discourse Studies in General

The outcome of the present research is consonant with findings from functionally-motivated discourse studies on languages other than Mandarin. Particularly worth mentioning are Diver's (1969) discovery of communicative relevancy in the Greek inflectional paradigm and Hopper and Thompson's (1984) revelation of the discourse basis for lexical categorization in universal grammar.

With the assumption that morphological units were strung together to signal meanings and that such meanings were responsible for the non-random distribution of linguistic strings in discourse, Diver (1969) investigated the meanings of the co-occurrences of two types of Greek inflectional morphology, voice (active, middle) and tense (aorist, imperfect). From the results of a series of quantitative analyses, Diver concluded that the grammar of Homeric Greek involved a system of RELEVANCE, which was used to indicate the extent to which individual events were "relevant to the main interest of the communication in process" (p. 48). The system of relevance is essentially a set of form-meaning correspondences which Diver represented as the following:

Relevance

MORE CENTRAL (or MOST RELEVANT)
aorist active

LESS CENTRAL (or MORE RELEVANT)
aorist middle

LESS PERIPHERAL (or LESS RELEVANT)
imperfect active

MORE PERIPHERAL (or LEAST RELEVANT)
Imperfect middle

For languages as unrelated as classical Greek and modern Chinese, the similarity captured by the relevance system of Diver and the grounding mechanism developed in this dissertation is resounding. Although different in the type of linguistic resource invoked, the grammars of both Greek and Mandarin seem to have developed means whereby the speakers can encode various degrees of relevance/salience in whatever information being imparted. Independently motivated to explain the non-arbitrary arrangements of some linguistic units and the non-random distribution of those arrangements in discourse, the relevance system and the grounding mechanism have extracted the same "internal, unobservable factor of which the observable phenomena are external manifestations' (Diver, 1979, p. 67). It is this factor, communicative function, that has provided the basis on which some superficially related configurations can be characterized in a principled and unified manner.

Also shared by the system of relevance and the grounding mechanism is the understanding that notions such as "relevance" and "salience" are subjective by definition. Nothing is inherently relevant/salient. It is up to the speaker to determine the relevancy/saliency status of a given chunk of information. In other words, there is no external pressure under which a speaker must code a particular degree of relevance/salience in a particular type of information. What are included in the system of relevance and the grounding mechanism, then, are simply coding options that are available to the speakers. Under what circumstance speakers relatively commonly choose to employ which option is thus empirically interesting.

Hopper and Thompson (1984) investigated linguistic categories from a universal viewpoint. While categories such as ADJECTIVE, GERUND, etc. were found to be inconsistently represented among languages, it was quite universal about the basic categories N and V as the lexicalizations of the prototypical discourse functions of "discourse-manipulatable participant" and "reported event" respectively. They also observed that the grammars of languages tended to label the categories N and V with morpho-syntactic markers, e.g. deictic markers for N, tense markers for V, which are characteristic of these categories to the degree that a given instance of N or V approached its prototypical discourse function. They concluded by suggesting that "linguistic forms are in principle to be considered as LACKING CATEGORIALITY completely unless nounhood or verbhood is forced on them by their discourse functions" (p. 747, emphasis is original).

Hopper and Thompson's observation is entirely borne out by the morphosyntactic variability of Mandarin direct objects. In the Mandarin case, in fact, the nouniness of a linguistic form depends not only on whether or not it is a discourse manipulatable participant, but also on how salient a participant it is perceived for the purpose of the discourse in process. Thus, the more salient a patient is considered to be for the discourse, the more likely its linguistic representation will be regarded as a member of the noun class, and the more distinctly such membership will be indicated, e.g., with a noun classifier; conversely, the less salient a patient is considered to be, the less likely its linguistic representation will be indicated as a member of the noun class, and the more likely it will be marked as a "defective" noun through noun-incorporation. What is true about lexical categories is true about grammatical relations. Thus, the more salient a patient is perceived to be, the more it will manifest itself as a prototypical direct object and be marked as such by the object marker *ba-*; conversely, the less salient it is perceived to be, the more likely it will be realized as an incorporated object.

Of course, the phenomenon studied in this dissertation hardly allows a distinction between lexicon and syntax. In this respect, the present study is also quite in line with the expectation engendered by the cognitive grammar that there is no sharp dichotomy between morphology and syntax and that

lexicon, morphology, and syntax are all matters of degree (Langacker, 1987). A linguistic form representing a patient may be larger than a lexical item sometimes, but it may fall below the word level other times. A synthesized notion "morphosyntax" has been used throughout the thesis just to indicate that the linguistic coding of patients in Mandarin Chinese is not exclusively a case of morphology, neither is it strictly a case of syntax.

7.4. CONCLUSION

This dissertation has been concerned with the nature of the morphosytnactic contrasts among Mandarin direct objects manifested in three object-containing constructions. I have approached the grammatical phenomenon from a cognitive-functional perspective and found that the three different constructions provide three different ways to represent direct objects in terms of specification/abstraction. To capture such differences, I have proposed a grounding mechanism that consists of three form-function correspondences. Specifically, I have hypothesized that the *ba*-construction foregrounds direct objects whose individual references are salient for the purpose of the discourse, the object-incorporation construction backgrounds direct objects whose individual references are insignificant, and the basic verb#object construction keeps direct objects ground-neutral. To test the validity of the grounding mechanism, I have developed two empirical studies, a quantitative text-analysis and a speaker-judgement experiment. Using two independently motivated criteria, event-sequentiality and textual-mention, to determine speaker-imposed discourse saliency, I have found that the three morphosyntactic forms of direct objects clearly correlate with the saliency statuses of object referents in discourse. The empirical evidence has thus led to the conclusion that the grounding mechanism is part of the grammar of Mandarin Chinese.

The grounding mechanism may have provided a principled and unified explanation for the non-random distribution of the three object-containing constructions in Mandarin discourse, but discourse in general is far more complex than just the assignment of different degrees of specification or abstraction to direct object referents. Conceivably, discourse is

organized simultaneously along several crosscutting dimensions, some of which are topic-comment alignment, given-new information arrangement and saliency grounding. Although these dimensions can be isolated for purpose of investigation, their interactions must eventually be addressed. How and to what extent grounding interacts with other discourse motivations is thus a natural extension of the present research.

Also potentially interesting is the topic of universality with respect to discourse grounding. Although sociocultural conventions inevitably enter the organization of linguistic structures, the cognitive apparatus which allows speakers to conceive meaning should be universal. It is also universal that speakers use grammatical structures for communicative purposes. It should contribute to our understanding of language in general to find out what means different languages have evolved to serve the speakers' conceptual and communicative needs regarding discourse saliency.

The assumption under which the discourse grounding mechanism has been developed is that grammatical structures and their communicative functions are intimately bound up with human cognitive abilities to conceptualize the same situation in different ways, attending to certain facets of the situation more acutely than others, approaching it at different levels of specification/abstraction, and so forth. Of course, such assumption can only be verified by systematic empirical studies. Subsumed under this assumption is the premise that speakers' conceptualizations which underlie grammatical structures and their communicative functions are influenced and oriented by socio-cultural conventions of specific linguistic communities. Therefore, form-function relationships should be investigate in language-specific terms, at least initially. With this premise in mind, I hope the investigation carried out here has to some extent substantiated the general theoretical assumption. To the extent that it has, I hope the present study can contribute to a view of language as a cognitive-functional system and to a line of linguistic research as an empirical undertaking to discover the cognitive-functional underpinnings of grammatical structures.

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APPENDICES

Stimulus Episode 4.3.3.

Target event: In-sequence
Target DO: 0 mention elsewhere
Subject: n= 36
Form selection: O = 88.9%; *ba*-O = 5.5%; I-O = 5.5%

小 段 打 量 了 魏 然 一 眼，象 是 在 掂 量 他 刚 才 说 的 是
Xiao Duan look-PFV Wei Ran one-CL, as:if be-DUR weigh he just say-NOM be

应 酬 话 呢，还 是 实 在 话. 那 劲 头 就 跟 在 自 由 市 场 买 菜
half:hearted talk QUES, or be sincere talk. That spirit just like at free market buy vegetable

差 不 多，别 看 他 象 真 的 似 地 盯 着 小 贩 手 里 的
differ not much, not see he like real-NOM similarly-ADV gaze at monger hand-inside-GEN

那 杆 秤，其 实 呢，没 一 回 不 让 人 家 给 蒙 了. 他 也 知 道 自 己
that steelyard, actually PAUS, not one-CL not let other to delude-PFV. He also know self-

的 水 平，这 不，打 量 了 魏 然 半 天，到 了 还 得 问 一 句:
GEN ability, this not, look-PFV Wei Ran half day, at:end still have:to ask one-CL:

"真 的 呀?" 问 完 了 又 盯 住 魏 然 看，———— 他 才
"real-NOM QUES ?" Ask finish-PFV again gaze:at Wei Ran look, ---------- he then

满 意 地 走 了.
satisfactorily-ADV leave-PFV.

(一) 直 到 魏 然 郑 重 地 把 头 点 了 一 下，
1. Until Wei Ran solemnly-ADV BA head nod-PFV once,

(二) 直 到 魏 然 郑 重 地 点 了 一 下 头，
2. Until Wei Ran solemnly-ADV nod-PFV once head,

(三) 直 到 魏 然 郑 重 地 点 头 了，
3. Until Wei Ran solemnly-ADV nod-head-PFV,

'Xiao Duan took a look at Wei Ran as if he was trying to determine whether his (Wei Ran's) words were commonplace civilities or honest opinion. It was just like he was buying vegetables on the free market, although his eyes were fixed on the steelyard in the hands of the mongers, yet, he got deluded every time. He had a good hunch of his own ability, that was why, after looking at Wei Ran for quite some time, he still had to ask "You mean it?" then he went back gazing at Wei Ran, ---------- did he leave satisfied'

Until Wei Ran nodded his head solemnly,

Stimulus Episode 4.6.2.
Target event: Out-of-sequence
DO referent: 0 Mention elsewhere
Subject: n=36
Formal selection: O = 5.5%; *ba*-O = 2.8%; I-O = 91.7%

岳 拓 夫 心事 重重. 但 进得 办公室 来, 目 光 依旧 习惯 地
Yue Tuo-fu anxiety loaded. But enter office RVC, eye light as usual habitually-ADV

扫 过 室 内 的 每 一 个 物件. 还 好, 一 切 都 一丝不苟,
flash over room-inside-GEN every one-CL object. Still good, everything all scrupulous,

安分守己 地 呆在自己 的 位置上. 室内 的空气有点儿混闷. 他
behave:oneself-ADV stay at own-GEN place. Room-inside-GEN air a:bit stuffy He

刚 要 去 开 窗, ———— 不 能 不 防 窗 下 有 耳, 他
just want go open window, ---------- not can not guard:against window under have ear. He

决 定 还 是 开 电 扇 吧. 开 了 以 后, 又 把 电 扇 头
decide alternative turn:on electric fan PAUS. Turn:on-PFV after, then BA electric fan head

调 了 调 方 位, 让 风 尽 量 吹 向 他 的 办公桌.
adjust-PFV-adjust orientation, to let wind to:the:full blow toward his-GEN bureau.

(一) 忽 然 想 到 等会儿 要 找 人 来 谈 话,
1. suddenly remember later want call-person RVC talk,

(二) 忽 然 想 到 等会儿 要 找 一 个 人 来 谈 话,
2. suddenly remember later want call one-CL person RVC talk,

(三) 忽 然 想 到 等会儿 要 把 一 个 人 找 来 谈 话,
3. suddenly remember later want BA one-CL person call RVC talk,

'Yue Tuo-fu was laden with anxiety. However, entering the office, he glanced over each and every object in the office just as before. Fortunately, all were scrupulous, staying at their own places. The office was a little stuffy. As he was about to open the window, ---------- He must not be heard by anybody walking by the window, he decided that it would be best to just turn on the electric fan. After he turned it on, he adjusted the head of the fan so that it would blow directly toward his desk.'

he suddenly remembered that he was going to call somebody over for a talk.

Stimulus Episode 3.3.1.
Target event: In-sequence
Target DO: 3 mentions elsewhere
Subject: n=36
Formal selection: O = 5.5%; *ba*-O = 94.5%; I-O = 0%

候 车 室 的 门 猛 地 开 了，一 阵 狂 暴 的 冷 风
Waiting room-GEN door suddenly-ADV open-PFV, one-CL violent-ADJ cold wind

卷 着 尘 雪 "呼" 地 掠 将 进 来，室 内 的 人 都 本 能
roll-DUR dusty snow *HU*-ADV sweep in-RVC. Room inside-GEN people all instinctively-

地 缩 紧 身 驱. 这 时 只 见 一 个 壮 汉 慢 条 斯 理 地
ADV shrink back body. This time one see one-CL strong man slowly:unhurriedly-ADV

从 长 椅 上 爬 了 起 来，紧 了 紧 腰 带，拉 了 拉 裤 脚，
from long bench-top rose-PFV RVC, tighten-PFV-tighten belt, pull-PFV-pull trousers leg,

慢 条 斯 理 地 踱 过 去 关 上 了 被 风 吹 开 的 门，——————
slowly:unhurriedly-ADV stroll over close-PFV PASS-wind blow open REL door, ----------

试 试 顶 紧 了，又 慢 条 斯 理 地 踱 回 到 自 己 的 位 置 上，重 新
test test hold tight-CRS, then slowly:unhurriedly-ADV stroll back to own-GEN seat, again

躺 下，闭 上 眼 睛，嘴 角 挂 上 了 一 丝 轻 蔑 的 微 笑.
lie down, close RVC eye, mouth corner hung-PFV one-CL disdainful-ADJ smile.

(一) 又 扯 过 一 条 断 了 腿 的 长 椅 顶 上 那 扇 门，
1. then pull over one-CL break-PFV leg REL long bench hold that-CL door,

(二) 又 扯 过 一 条 断 了 腿 的 长 椅 顶 门，
2. then pull over one-CL break-PFV leg REL long bench hold-door,

(三) 又 扯 过 一 条 断 了 腿 的 长 椅 把 门 顶 上，
3. then pull over one-CL break-PFV leg REL long bench BA door hold,

'All of a sudden, the door of the waiting (in the railway station) opened. A gust of cold, violent wind swept in with snow dust. By instinct everybody shrank back. Just then a man of strong physique rose slowly from a long bench, tightened up his belt, tidied up his pants and strolled slowly over and closed the door which had been blown open by the wind, ---------- After making sure that it was held up tightly, he then slowly strolled back to his seat. Once again he lay down, closed his eyes and let out a disdainful smile at the corner of his mouth.'

then he pulled over a bench with a broken leg and held up the door,

Stimulus Episode 3.3.2.
Target event: Out-of-sequence
Target DO: 2 mentions elsewhere
Subject: n=36
Formal selection: O = 16.7%; *ba*-O = 27.8%; I-O = 55.6%

开 始 卖 票 了. 那 个 排 在 前 面 的 男 记 者 被 人 群 拥 来
Begin sell-ticket CRS. That-CL line in front REL male journalist PASS-crowd push forth

挤 去, 离 售 票 口 越 来 越 远 了. 这 时, 那 女 记 者
push back, from ticket window further further away-CRS. This time, that female journalist

从 人 群 中 把 同 伴 拉 了 出 来, 让 他 看 东 西, 自 己 理
from crowd middle BA colleague pull-PFV RVC, let him look:after luggage, self smooth-

了 理 头 发, 抖 了 抖 围 巾, 便 径 直 朝 一 个 铁 路 警 察 走
PFV-smooth hair, shake-PFV-shake scarf, and directly toward one-CL railway.police walk-

了 过 去, 跟 他 说 了 几 句 什 么, 随 后 掏 出 了 个 证 件
PFV over, to him speak-PFV a:few-CL something, afterwards take-RVC PFV CL ID-card

来, 递 过 去 时 又 那 么 嫣 然 一 笑. _____ 也 没 说 什 么,
RVC, hand over RVC time with that winsome one smile. ---------- also not say anything,

只 甩 了 一 下 头, 两 个 记 者 就 跟 他 进 了 值 班 室.
only toss-PFV one-CL head, two-CL journalist then after him enter-PFV duty office.

(一) 铁 路 警 察 并 没 有 接 她 的 证 件,
1. Railway police actually not take her-GEN ID-card,

(二) 铁 路 警 察 并 没 有 接 证 件,
2. Railway police actually not take-ID-card,

(三) 铁 路 警 察 并 没 有 把 证 件 接 过 去,
3. Railway police actually not BA ID-card take RVC,

'Ticket sale was on now. The male journalist who had been lining in the front was pushed by the crowd further and further away from the ticket window. Just then the female journalist pulled out her colleague from the crowd and told him to look after the luggage. She smoothed her hair a little, shook her scarf a little and then walked directly to a railway security man. She said something to him and then took out an identification card. As she was handing the card to the policeman, she gave him a winsome smile. ---------- The security man did not take the card, nor did he say anything. He merely tossed his head slightly and the two journalists immediately followed him to the office.'

The policeman did not take her identification card,

Text Analysis

Yang, Shuo. 1960. *Yang Shuo Duanpian Xiaoshuo* 'Short stories by Yang Shuo'. Beijing: Renmin Wenxue Chubanshe.

Da Qi 'Big Banner': Episode 1.

V#O construction: 4
In-sequence event: 4 (100%); Frequency of mention: 6 (1.50)

ba-construction: 3
In-sequence event: 3 (100%); Frequency of mention: 8 (2.67)

I-O construction: 3
In-sequence event: 1 (33%); Frequency of mention: 1 (0.33)

一九三八年四月，清明节前后。
1938 year April, QingMing Festival around.

北宁路上，一列客车从天津开来，离滦县
Beining Road, one-CL passenger train from TianJin drive RVC, from Luan County

不远时，停在一个小站里上水。站台十分冷清，只见
not far time, stop at one-CL small station fill-water. Platform extremely desolated, one see

一个商人模样的旅客，从三等车走下来，右肩
one-CL monger-like ADJ passenger, from third-class car walk down RVC. Right shoulder

扛着个被卷，左手提着个蓝布包袱，蹒蹒跚跚地朝
carry-DUR CL bedroll, left hand hold-DUR CL blue cloth packet, awkwardly-ADV toward

站外走去。他是个矮胖子，黝黑的圆脸泛着油光，
station outside walk RCV. He be CL short stout, dark-ADJ round face glow-DUR oily shine,

两只小眼闪射着针尖似的光芒。
two-CL small eye gleam-DUR pin-point-like-ADJ ray.

路警拦住他问："包里什么东西？打开来看看！"
Railway policeman stop him ask: "packet inside what stuff? Open-RVC see see!"

旅客赶紧放下行李，撩起青线呢长袍，蹲
Passenger quickly put down bedroll, hold-RVC black cotton wool long gown, squat

下身，急忙地解开包袱，满脸陪着笑说：
down body, hurriedly-ADV unwrap-RVC packet, whole face give-DUR smile say:

"看吧，看吧，不过是些不值钱的湖笔，刚从天津
"Look, look, mere be some not valuable-ADJ *Hu* writing:brush, just from Tianjin

贩来，打算到这一带小学堂做做生意。"
bring-RVC, plan in this area elementary school make make business."

路警弯下腰，伸手把一封一封的笔
Railway policeman bend down waist, extend hand BA one-CL one-CL PART brush

翻了翻，又吩咐旅客打开行李卷，草草地看过一遍，
turn-PFV-turn, then order passenger open bedroll, roughly-ADV look through one time,

这才把手一挥，昂着头走去。笔贩子耐着
this only BA hand one wave, hold:high-DUR head walk away. Brush monger hold-DUR

心性，重新把行李收拾停当，斜瞟了路警一眼，
temper, again BA bedroll make ready, sidelong glance-PFV railway policeman one glance,

迎着一阵风沙走出车站。
face-DUR one-CL wind sand walk out train station.

'It was April,1938, around the time of the QingMing Festival.

En route to Beining, a train came from Tianjin. It pulled in at a small station not far from Luan County to get water. The platform was very desolated. A monger-like passenger got down from a third class car. Carrying a bedroll on his right shoulder and holding a packet wrapped in a piece of blue cloth in his left hand, he was hobbling out of the station. He was a short stout man. His dark round face was glowing with oily shine, and his two small eyes were sending out sharp flashes.

A railway policeman stopped him and asked: "What is inside the packet? Open it up for inspection!"

The passenger quickly put down his bedroll, held up his black cotton-wool gown, squatted down, hurriedly unwrapped the packet and said with a obsequious smile:

"Of course, of course. These are merely some cheap writing brushes made in *Hubei*, I just got them from Tianjin and plan to do some business with the elementary schools in this area."

The railway policeman bent down, turned over each and every writing brush. Then he ordered the passenger to open up his bedroll. The policeman went roughly through the bedroll. Only then did he wave his hand (gesturing to let the passenger go) and went off with his head held high. Holding his temper the brush-monger retied his bedroll, cast a sidelong glance at the policeman and walked out of the station, with sand blown into his face.'